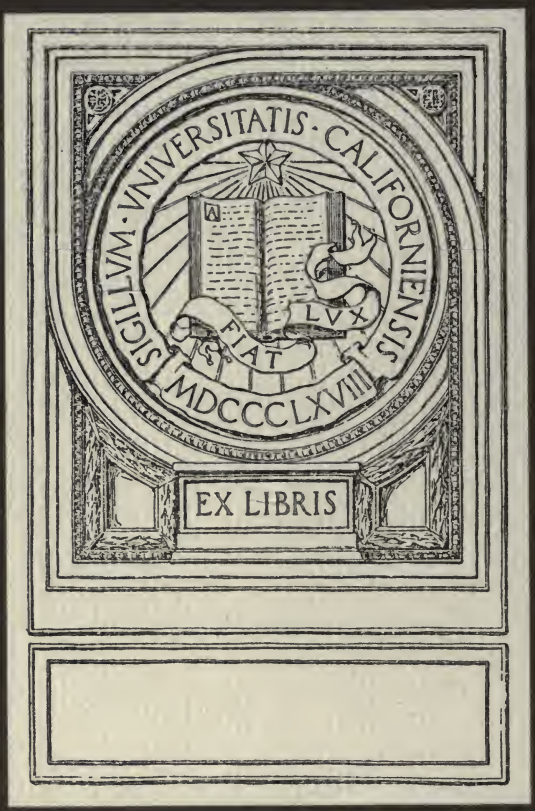
THE UPPER SILESIAN QUESTION AND GERMANY'S COAL PROBLEM

BY SIDNEY OSBORNE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THE UPPER SILESIAN QUESTION AND GERMANY'S COAL PROBLEM

BY

SIDNEY OSBORNE

IN TWO PARTS
COMPLETE IN ONE VOLUME
PART ONE

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FOREWORD

The author is aware that the most frequent charge launched against recent writers who have in any manner taken a position on current questions that is not unfavorable to German interests, has been that they are pro-German. Even Maynard Keynes had to suffer this charge.

At the risk of meeting a similar fate, the author herewith presents certain views which, however much they may seem favorable to German interests, are in no sense the result of German influences or pro-German bias. Indeed, if a declaration from the author is not entirely unacceptable, he wishes to add, by way of partial defence against the pro-German charge, that he is a native-born American citizen, educated in the schools and higher institutions of learning in the United States, and that he sympathized with the aims and ideals enunciated by the Allied and Associated Governments during the war, and particularly, of course, with those proclaimed by President Wilson.

In the preparation of what follows, the author has striven to present only such facts as seem to him capable of verification by any impartial investigator.

He has made an investigation, on the spot, of the conditions and political problems in Upper Silesia, with special reference to the possible fate of that world-historic region, under the provisions of the Treaty of Versailles. He has also made a study of Germany's coal production and of those other kindred subjects of inquiry, which are so closely bound up with the question of what is to become of Upper Silesia.

Facilities were courteously extended to the author by the proper authorities when it became known that he had the purpose to write upon these subjects, and it was sufficient to assure these authorities that he proposed to treat the topics discussed, objectively and without bias, to secure such permission as was necessary for making the requisite investigations.

As regards the necessity for the production of such a work as this, one has only to make a study of the reports published by the press in America and in England (to mention only the English-speaking countries), to discover what a vast amount of ignorance exists with respect to these problems which are of such vital importance not alone to Germany but to the world-at-large. To cite but one example — the author had occasion to read a copy of the *New York Tribune* of August 1, 1920, in which appears an article on the Russian and Polish situation by Frank H. Simonds, than whom there is no more influential and widely read writer on questions relating to the war and the peace terms in the English-

speaking world. Mr. Simonds goes on to argue that great injustice is being done to Poland, by failure to recognize her claims as championed by the French, and, among others, her claims upon Upper Silesia, where, as Mr. Simonds asserts, there is "not a question as to the predominance of Polish tongue and race".

Now, as a matter of fact, as the readers of this book will very soon discover, not only is there a question about the predominance of Polish tongue and race in Upper Silesia but the question is rather, To what extent has Poland exercised any influence whatever upon the history and development of Upper Silesia during the past six hundred years?

The so-called Polish element in Upper Silesia speak a language known as *Wasserpolnisch (Water Polish)*, which is a mixture of German and Polish and quite unintelligible to the Poles across the border, who, indeed, have had nothing in common with the Upper Silesians for over six centuries past, excepting when they have wished to use them, as recently, for nationalistic Polish purposes, that is to say, for political purposes. It would be just as correct to call these Upper Silesians, Poles, as it would be to call those inhabitants of Pennsylvania who speak the dialect known as "Pennsylvania-Dutch", (a mixture of German and English), Germans. Moreover, Upper Silesia has been indisputably German land for six centuries, was colonized and settled by the Germans,

and has been developed by a combination of factors which are entirely German in origin. Nor do the Upper Silesians wish to be anything but German.

The peace-makers at Paris, influenced by propaganda * derived exclusively from Polish sources, made a most grievous mistake as regards the question of the nationality and political sentiments of the population of East and West Prussia with respect to whom a plebescite was ordered to be taken, in the expectation that a heavy pro-Polish vote would be revealed. The result of the plebescite showed, on the contrary, that over 95 per cent of the population were German and wanted to remain German. A similar mistake has been made with respect to Upper Silesia, and as the essential elements of the question do not seem to be understood in the countries which fought against Germany, the author has endeavored to present the facts in the pages that follow.

For purposes of clearness and precision the author has divided this little work into two parts. Part I will be taken up with the facts that bear upon the question of the natural, political and economic unity of Upper Silesia with Germany and in this connection

* For example, the authorized English version of "Petite Encyclopédie Polonaise", page 19 asserts that 35.5 per cent of the population of West Prussia are Poles, in the Dantzig district 67.73 per cent, and in East Prussia 50 per cent. These figures were accepted at Paris as authoritative, whereas the recent elections in these districts show that over 95% of these people are pure German.

it has to a certain extent been necessary to discuss Polish history. The author has, however avoided the mistake of consulting German, Russian or Austrian authorities with respect to matters upon which they might be expected to exhibit some bias. In such cases he has consulted only the best English and French authorities.

Part II will be taken up with the problem of Germany's coal production and some facts and figures will be cited which have hitherto escaped publication.

CHAPTER ONE

THE NATURAL UNITY OF SILESIA

All Silesia, like ancient Gaul, is divided into three parts. It has a Lower Silesia, a Central Silesia and an Upper Silesia. The River Oder traverses Silesia from near its source in the Moravian Mountains at Oderberg, and running in a northwesterly direction, passes on into the province of Brandenburg. Roughly speak a line drawn through Neisse, Oppeln and Kreuzburg to the frontiers, marks the limits of Upper Silesia; a similar line running parallel to this one about half-way between Breslau and Liegnitz marks the limits of Central Silesia. All that remains is Lower Silesia.

The unity of Upper Silesia is deeply founded on the character of the country—its topographical and natural features. In the main, it is a vast, low, level plain. In the districts of Neisse, Neustadt and Leobschütz, the level appearance of the country is broken by a chain of hills which give this part of the country a somewhat mountainous character. But these elevated ranges are but the foothills of the Sudetic mountains which constitute the borderland

to the South. An elevated limestone ridge (Muschelkalkrücken) running eastward from the Oder in the direction of Tarnowitz (80 Kilometers * long and 20 Kilometers broad at its widest, between Gross Strelitz and Ujest), likewise interrupts, over a comparatively minor stretch of territory, the generally even character of the Upper Silesian country. To the northward the River Malapane flows in a westerly direction into the Oder, and to the southward, the Klodnitz River pursues the same general direction into the Oder **.

The River Oder, as it makes its way through Upper Silesia, receives into its channels practically

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* A kilometer is 5/8 of a mile.

** The author refers, on the one hand, to the natural unity of *Upper* Silesia, and on the other hand, to the natural unity of Silesia, of which it is a part. By this he does not mean to signify that Upper Silesia, apart and by itself, could independently perform its proper functions and maintain a separate life. On the contrary his purpose is to show that, as a unit, it is a part of the larger unit Silesia, which, in turn, is a part of the still larger unit Germany, and that none of these parts can exist except as part of the larger unity. Just as the wheel cannot perform its functions without the hub, nor the wagon without the wheel, so Silesia cannot exist without Upper Silesia, nor Germany without Silesia. In this analogy, Upper Silesia is the hub, Silesia the wheel, and Germany the wagon. Moreover in laying stress on the natural unity of Upper Silesia, attention is called to the fact that, under the terms of the Peace Treaty, Upper Silesia is divided into three or four separate fragments and that one of these fragments has been assigned to Czecho-Slovakia, another to Germany, and the other fragments are to be assigned in accordance with the outcome of a plebescite.

all of the water-courses of Upper Silesia. Five of them—the Ruka, the Birawka, the Klodnitz, the Malapane and the Stober—enter it from the East and four of them—the Zinna, the Proskau, the Hotzenplotz and the Glatzer Neisse—from the West. Mention is made only of the streams of larger size. From Cosel northward, at its junction with the River Klodnitz, the Oder becomes navigable.

Thus the Oder, with its tributaries which water the Silesian plain, seems to fix the natural limits of the country in a manner that defies all attempts to mutilate them. To disintegrate the natural boundaries by setting up new and artificial limits that would chop these valleys and streams into fragments and place part in one country and part in another, would be like violating the inexorable laws of nature.

Upper Silesia, eastward of the Oder, is predominantly forest land. A broad belt of forest land, between Oppeln and Kreuzburg, extends easterly and southeasterly to the frontiers of Poland to the north of Tarnowitz. An almost equally broad forest belt extends, from between Cosel and Ratibor, in an easterly direction to the Polish frontier. In the midst of these forest belts lies the chief industrial zone, in the form of a triangular wedge, in which Gleiwitz, Beuthen and Myslowitz are the apexes. A second industrial zone, to the south, separated from the first by forests, extends in a half-moon shaped strip from Nikolai and through Orzesche to Knurow. Still

further south is yet another industrial zone, likewise imbedded in the surrounding forest lands and forming a triangular wedge with Rybnik, Romanshof and Pschow at the apexes. Each of these industrial zones lies imbedded in the midst of the surrounding forest belts and agricultural lands to which their innumerable smoking chimneys offer a startling contrast. There is, finally, a small industrial district in the neighborhood of Hultschin quite near the former boundary between Austria-Hungary and Germany. This industrial district is a part of the territory which Germany has been obliged to assign to Czecho-Slovakia under the provisions of the Peace Treaty.

The Oder, with its ever broadening valley to the north, divides eastern from western Upper Silesia. West of the Oder we find no great belt of forest land except in the Falkenburg distict, southwest of Oppeln. For the rest, this entire region, on the left bank of the Oder, possesses almost a purely agricultural character as far south as the foot-hills of the Sudetic mountains.

Thus the valley of the Oder assumes, throughout its course in Upper Silesia, the character of an agricultural middle zone, whose importance is greatly magnified by the fact that it receives from both sides and at right angles to the Oder valley, the water of all the various streams of Upper Silesia, already specifically referred to, which, together with their valleys, are in the nature of things topographically

and hydrographically united with and tributary to the Oder Valley. Such, in brief outline, are the main elements which establish that all of Upper Silesia (with the insignificant exception of a very small corner in the southeast between Pless and the Przemsa valley) constitutes a topographic and hydrographic unit.

Silesia, it is true, is a kind of boundary district, a connecting link between western Europe with its irregular coasts, its oceanic climate, its varied surface, its early developed civilization, and Eastern Europe, which, as to surface and climate is, like most inland countries, flat and monotonous, and appears to us still to-day as backward in civilization. Moreover, as a transit country, it comprises great contrasts in a narrow space, an unusual variety of mineral and of geological formations. Indeed, the development of human civilization, in this country of contrasts, is as various as its rich vegetation, its fauna, and above all its bird world.

But, in spite of the variety, which attracted Goethe's artistic and observant eye so much that he called Silesia a "tenfold interesting country", it is, as Goethe says, "a strangely beautiful, conspicuous and conceivable whole", an indivisible whole, not by chance, but by nature. It is kept together by its perfect system of rivers, the Oder and its tributaries, which reach out towards and to a great extent are fed by the southern mountain chains of the Sudetes. Its natural mountain frontier in the southwest, in the

direction of the Bohemian basin is so strong, that even the apparently arbitrary projection of the Glatz mountain district plainly belongs to Silesia, partly on account of the impassableness of the mountains which separate it from Bohemia and Moravia, and partly on account of the waters discharging into the Oder.

In the North and East, too, where the protecting mountain wall is wanting, the boundaries of Silesia are distinctly drawn by the rivers, especially by the swampy lowlands of the Bartsch which give that stream more of the character of a frontier or boundary than that of a watercourse, like the Oder, that plays the part of a highway joining up various regions of the same country. Thus the frontiers between Silesia and Poland have remained practically unbroken and unchanged for nearly six centuries.

If further proof were needed of the natural unity of this land, it is to be found in the fact that four important highways, following naturally defined routes, traversed Silesia from the earliest times of which any record is preserved in Germanic history. These great highways were defined, with respect to the direction they took, purely by natural conditions, and in the Middle Ages they played an important part in the trade of central Europe as great commercial highways which linked up the East and South with the North and West. To-day yet, these highways still preserve the character of great traffic carriers. Moreover the railroads of Upper Silesia,

the railroad on the right bank of the Oder, the railways in the industrial districts and the Oderburg-Vienna line—all of these modern traffic routes follow the general course and direction taken by the old historic highways. A brief description of these latter may not prove uninteresting, as follows:

1. The Salt Highway, over which salt was conveyed into Germany. This road runs from Breslau, and by way of Kreuzburg, Rosenberg, Guttentag, Lublinitz and Czentochow to Cracow and further on to Wieliczka.

2. The great Breslau-Cracow Trade Route, which follows the valley of the Oder, running from Oppeln *via* Gr. Strelitz, Tost, and Peiskretscham to Beuthen and then *via* Oswiczim to Cracow.

3. The highway Oppeln—Ratibor—Loslau, was the medium of traffic with the Danube valley.

4. The highway Brieg—Grottkau—Neisse—Ziegenhals—Jägerndorf led into the Danube valley and thence into Upper Italy.

CHAPTER TWO

THE POLITICAL UNITY OF SILESIA

I. Colonization of Upper Silesia by the Germans

If the natural unity of Upper Silesia is exhibited by the course and direction of its rivers and valleys, by the great natural highways which intersect it, by its general physical aspect, topography, and hydrographic harmony, so, likewise, does the history of its colonization exhibit features which reinforce the argument on this point and at the same time provides us material for our contentions with respect to the political unity of the Upper Silesians.

Prior to the twelfth century of the present era, when a general movement of whole peoples throughout central Europe was a common phenomenon, the Germans, in their wanderings, came likewise to Upper Silesia and established some settlements there in those portions of the land which were level, open and free from forests. After them came the Slavs and settled themselves in many of the places wich the Germans had abandoned in their search for better land further west.

Towards the middle of the twelfth century, how-

ever, the Upper Silesian Piasts, rulers of the country at that time, made great efforts to settle the country with Germans from the West who were known to stand upon a much higher cultural level than their own Slav subjects. The object was to introduce better methods of land cultivation and the more intensive processes for developing the riches of the earth which the Germans were known to possess. The Piasts had found it necessary to increase their incomes from these lands as well as to promote the general welfare of the country in view of the added burdens that were put upon them by their feudal obligations. Accordingly, the Germans came and brought with them advanced methods of utilizing and saving the fertility of the soil (*Dreifelderwirtschaft*), and their iron plows which prepared the ground for tilling to much greater advantage than anything known to the Slavs of that day. But the Germans likewise brought with them their own laws and customs which, like their agricultural measures, stood on a much higher level than those known to the Slavs, and particularly as regards the life of the land-workers, the Germans inaugurated many reforms which made their lot far more tolerable and less abject. Many of these Germans now began the great work of clearing the land of its forests which were to be found nearly everywhere in almost impenetrable density.

They began making their clearances in the valleys

of the Hotzenplotz and Zinna, their starting point being the town of Leobschütz. The great work of the pioneer and the civilizer which the Germans thus inaugurated at the beginning of the thirteenth century is in the very district which seven centuries later they are required to give up to Czecho-Slovakia by the decrees of the Paris peace-makers.

At the same time, they laid low the forests in the district of Neisse over a considerable area north and south of the River Neisse. These two areas became completely Germanised by the beginning of the thirteenth century. Pressing further forward to the East, the Germans now crossed the Oder and founded the town of Ujest in the valley of the Opolini in the year 1223. From Ujest the Germans spread to the North, East and South. In the North they crossed the River Malapane and pressing forward to the River Stober colonized the forest lands between the Stober and the Malapane and created purely German settlements in a district of considerable area which included the towns of Kreuzburg (1254), Konstadt, and Pitschen besides the town of Landsburg (1294) somewhat to the eastward.

Eastward the Teutons advanced with a rapid stride and already as early as 1247 we hear of a German lead mine at Repten near Tarnowitz. In 1254 Beuthen was founded. To-day Beuthen is the second largest industrial city in Upper Silesia. In 1267 Gleiwitz was first settled. After another hun-

dred years, they had cleared the forests to the eastward to a considerable extent as far as Woischnik on the present borders of Poland. Likewise from out the Leobschütz district an eastward advance was made, crossing the Oder at Ratibor and extending the German settlements as far as Sohrau which was founded in 1271. From Sohrau the spread of the Teutons took place in all directions but particularly towards Rybnik and Loslau. Smaller bands of settlers betook themselves down-stream in the Oder valley.

On the left bank of the Oder, the spread of German colonization had gone on steadily for two centuries or more so that by the middle of the fourteenth century the process of wholly Germanizing that entire region may be fairly said to have been completed, including the absorption of whatever Slavic elements still remained there. On the right bank of the Oder, the colonizers had settled in zones which were separated from one another by broad belts of almost impassable forests. Nevertheless, even this entire region east of the Oder came to bear the stamp of German culture and civilization to an extent that left little doubt as to its permanency. Various monasteries had contributed greatly to this result among which are specially to be mentioned the Monastery at Czarnowanz near Oppeln, the Cistercian Monastery at Raudenz near Ratibor and at Himmelwitz near Gr. Strelitz.

From Central Silesia there was likewise an important movement of Germans into Upper Silesia as far as the extreme boundaries of to-day. Somewhat later, during the reign of Karl IV (1346-1378), when times were peaceful and there was ample protection to life and property, colonization went forward at a most rapid rate. After Karl's death, however, the old conflicts between the Silesian dukes broke out afresh, and the insecurity engendered thereby placed a considerable check on the further development of the land. Later, Upper Silesia was drawn into wars with the Bohemian King, George of Podiebrad, and was likewise obliged to take part in the Hussite wars and the wars of the Reformation. And, finally, the Thirty Years' War (1618-1648) came down upon, unhappy Silesia, laying waste its acres, plundering its inhabitants, and, in general, bringing the land to a state of desolation. More and more, at this period, the inhabitants of Upper Silesia abandoned the country-side and settled themselves in the towns. As in the country, so here in the cities, the Germans labored successfully and out of the towns made flourishing trading centres, where also the arts, science and education received a pronounced impetus from the German spirit of enterprise. It is true, however, that the continuance of unstable conditions in the sixteenth century and for some time thereafter, caused a great amount of German emigration from the lands east of the Oder

to the regions westerly thereof where the complete Germanizing of the country underwent no modification either then or thereafter. This was in large part due to the more settled conditions and to the greater fertility of the soil west of the Oder.

Such was the picture Upper Silesia presented to the world at the time it came under Prussian rule through the conquests of Frederick the Great in the Silesian wars with Austria (1740-1742 and 1744-1745).

The political union of Silesia made in 1742 with Germany, represented by Prussia, was prepared, as we have shown, by a development of centuries, during which the Germans had planted themselves and their institutions throughout the land, and had, in largest measure, by their own unaided efforts, recovered the country from a state of wildness and barbarism.

The separation of Silesia from the Habsburg Empire was well prepared in a two-fold way: first of all, the economical connection of Silesia — which we have still to speak of — with the other parts of Germany, had become more effective, since the seventeenth century, than before that time, for the Oder and Elbe navigation had weakened the economical relations of Silesia to the other parts of the Habsburg State and united it more closely to Germany. To this was added the inner alienation caused by religious differences which made the Silesian Protestants seek for more active sympathy from their fellow-

believers in the West. But these were not the only reasons which made the separation of Silesia from Austria easy and its coalescence with Germany firm and strong. The personality of Frederick the Great was a third powerful factor in the fulfilment of the work commenced.

Frederick the Great directed his constructive labors in Upper Silesia, generally speaking, to the improvement of conditions, and to the introduction, particularly in the lands east of the Oder, of new colonies of Germans. Accordingly in the region of the River Malapane, in the midst of the forest belt, he caused numerous German settlements to be established, and within four years (1770-1774) thirty-three of such local colonies were founded. Established in the midst of a prevailing Slav population, fifteen of these colonies did, nevertheless, remain purely German.

With the aid of these colonists, and under the direction of miners and founders from the Harz mountains and from Saxony, King Frederick founded (1754-'55) a new industry, the smelting of iron and the working of the Upper Silesian iron ore formations. The work was carried on in small smelting furnaces along the River Malapane. The furnace fires were fed with wood from the neighboring forests. The lead works at Tarnowitz, established in the Middle Ages, but abandoned during the later days of unrest and instability in Upper Silesia, were again placed

in operation. In the introduction of an excellent system of administration, and by the establishment of new institutions for the propagation of the arts, science and education, King Frederick transformed the land, within a very short time, into one of the most flourishing provinces of his kingdom.

When, later on, Napoleon I aimed at the domination of the world and thus menaced the independence of Germany, he did not plan a division of Silesia, but its complete separation from Prussia, in order, in this manner, to deal his German enemy a blow from which he might never recover. But the deadly danger was prevented, and it was from Silesia that arose the mighty movement of 1813 which led to the liberation of the whole of Europe from Napoleon's yoke. Silesia was the centre of the great German national movement. Here the great Coalition was brought to pass between Russia, Prussia, England and Austria, against the mighty usurper; here the general plan of campaign was drawn up.

The Silesians became still more closely bound to their fellow Germans in other parts of the kingdom through the part they took in the sufferings of the times (1807-1815) and in the regaining of their liberties through the reform laws connected with the name of Baron vom Stein, which granted the people self-government, the peasants liberation from the bands of feudality and the right of possession to the

ground cultivated by them. When, in the years 1840-1847, the Liberalism of the towns urged the grant of a constitution and representation of the people in Parliament, Silesia stood shoulder to shoulder with the remotest parts of the country — with East Prussia and the Rhinelands — in demanding these reforms. In the first meeting of deputies from all the Prussian provinces, the United Diet of 1847, a Declaration was made on behalf of the Upper Silesians that they had no other wish than to be and remain German brothers.

Neither in the following year of Revolution (1848), nor in the crisis of 1866 did Upper Silesia's union with Prussia waver in the slightest degree, and in the ensuing war with Austria, Upper Silesia displayed both absolute loyalty and true patriotism in the Prussian cause.

Thus the political affinity of Upper Silesia to Germany has become so much a part of the warp and woof of its inner life, its institutions, and its progress, as a result and by reason of its historical development both before and after 1742, that the idea of a possible separation of parts of Upper Silesia from the old Prussian State seems to the vast majority of Upper Silesians entirely inconceivable. Moreover, having regard both to the physical and the political unity of the Upper Silesian country, they feel that a mutilation and division thereof would betoken merely the triumph of human despotism over the clear commandments of nature.

CHAPTER THREE

THE POLITICAL UNITY OF SILESIA

II. The Historical Facts

By the partitions of Poland in 1772, 1793 and 1795, Russia obtained 180,000 square miles with six millions of people—*practically the whole of which lay outside the limits of the Polish race.* Prussia obtained 57,000 square miles with two and one-half millions of subjects of which less than three quarters truly belonged to the Polish people. Austria obtained 45,000 square miles, of which rather less thans two-thirds may be called truly Polish.

Thus out of a total area of 280,000 square miles — a territory larger than France or the German Empire — the great bulk, 210,000 square miles, was not properly Polish at all.

Most of it, as is well known to every student of the subject, was old Russian land, including much of the oldest Russia in history. And it was of this land, four-fifths of which constitutes non-Polish territory, that Poland sought to make herself master in her war against Russia in the year 1920.

The history of Poland's relations with Upper

Silesia is somewhat similar to the history of her relations with the Russian city of Kiev. Upper Silesia has been German land since 1336. Natural unity it has, of course, always possessed, as we have shown in a previous chapter, political unity it has attained since its colonization by the Germans and its absorption into the Prussian State. Its attainment, of economic unity has gone progressively forward since the early days when the German pioneer woodsmen felled the Upper Silesian forests with their axes, founded towns, villages and centres of industry, introduced advanced methods of agriculture and opened up the natural resources of the country. Moreover, in spite of some variations in the tongue, spoken locally, it has a population of unmistakable identity. Furthermore, as we shall show with greater particularity further on, it is connected with Germany by political and economic, national and intellectual ties. Having no rights in Upper Silesia from an historical, political, geographical or economic standpoint, the Polish claim to its possession can no more be supported than can the Polish claim to the possession of Kiev — the old chief city of the Muscovites almost from the very beginning of Russian history. It is true that Kiev, like Upper Silesia, at one time in distant past history had come under the Polish sway. When Russia lay prostrate under its Asiatic conquerors, the Lithuanians took advantage of their neighbor's

defencelessness to seize Kiev. With the union of Lithuania and Poland (1386) Kiev came under Polish suzerainty. But the rule of the Poles there, so long as it continued, was never anything but the forcibly imposed dominance of foreigners over an enemy people.

Similarly, in 1163, through the influence of the German Emperor Frederick I, surnamed Barbarossa, Silesia fell into the hands of the brothers Boleslaw and Miesko, who were descended from the Polish royal dynasty of the Piasts, and now founded a new ducal Piast line in Silesia. At first a certain legal connection between Silesia and Poland was kept up on account of the common descent of the princes, but this soon grew weaker and weaker, till at last finally dissolved when the king of Poland, in 1336 in the Treaty of Trentschin and then again in 1339, solemnly and unconditionally renounced all claims to Silesia which now became united with Bohemia, which at that time was preponderantly German and part of the German Empire. The finally decisive step taken in the direction of political union with Germany came in 1526 when Silesia came under the rule of the German dynasty of the Habsburgs.

The parallel to the history of Kiev under Polish sway lies in the fact that in 1667 the Moscow Tsars once more took possession of their ancient city and the distinct of Kiev which have continued to remain Russian down to the present time.

Our object in drawing this parallel is to call attention to the difference that apparently exists in most of the Allied countries as regards the attitude to be taken towards the Polish claims to Kiev and the attitude to be taken towards the Polish claims to Upper Silesia. In the former case even the press in the Allied countries protested when, in the summer of 1920, the Poles attempted to enforce, by military action, their alleged claims to the possession of Kiev—and the protest was based on the proper ground that Kiev was Russian territory and had been Russian territory for centuries past. No such protest, however, has ever been heard with respect to Polish pretensions in Silesia, although the latter region has been permanently German much longer than Kiev has been permanently Russian, and moreover the Polish tenure in Silesia, from 1163 to 1336, was of much shorter duration than the Polish tenure of Kiev which endured for nearly three centuries.

In this connection the question naturally arises why, if the Poles were willing to wage war for thirteen years against the Russians to establish their sway over the Ukrainian Cossacks, have they never wasted the bones of a single Polish Lancer for the possession of Upper Silesia during all the centuries when Poland was establishing and consolidating her Empire? And the answer is that Poland, having abandoned all her claims to Upper Silesia in 1336,

has never had the remotest idea of laying claim to it, never, at any rate, so long as Upper Silesia was supposed to be a poor and mainly barren country. Indeed, down to a very recent period when the development of the mineral wealth of Upper Silesia made that province an object of covetous envy, no Pole, however much of the earth's surface he may have claimed for Poland in other directions, had ever suggested that Poland had even the color of right to demand the possession of Upper Silesia. Is it then, because the Poles have discovered some new title deeds, of which then were ignorant in the preceding centuries, that they now demand to be placed in possession? We believe not. But the conclusion is obvious.

CHAPTER FOUR

THE POLITICAL UNITY OF SILESIA

III. Justice of the Polish Claims Historically Considered

In considering the rights and wrongs of the Polish question, it will be well to examine what Poland, or rather Poland-Lithuania, actually was prior to the first Partition in 1772. The Polish boundaries of 1772 included territory in the eastern part of this "land of plains", which was part of the oldest Russia. Right up to the "Polish River Bug" and the Carpathians stretched the Russian land in the ninth and tenth centuries, when the permanent nationalities of Europe were forming. In the middle of the thirteenth century, the Mongol Tartars from Asia had conquered and wrecked most of that old Free Russia which had flourished in the earlier centuries above referred to. One hundred years later, during the first half of the fourteenth century, the Mongol Tartars gave way before a new conqueror—the Lithuanian dukes. These latter, a remarkable series of military leaders, now subjugated most of western Russia with its old capital Kiev. The Poles them-

selves took as their part of the spoil, in this contest for the absorption of western Russia, Galicia whose Russian population we know today as Ruthenians. By the year 1375, the process of absorption had been completed and in 1386 took place the Personal Union of Poland and Lithuania, under one sovereign, leading ultimately to complete political identification, from which arose the great Polish Republic of the fifteenth, sixteenth and seventeenth centuries.

The history of these latter centuries is a tale much occupied with internal and external quarrels and dissensions, in which wars and religious intolerance play a notable part, together with the futile struggles of a few far-seeing patriots who aimed to deliver the country from the intolerable misgovernment which had come to take the place of the earlier wise rule of the dynasty of the Lithuanian Grand Prince Jagiello. The Polish nation had, from the beginning, shown themselves unwise. They had adopted a Constitution which established a so-called "Republic" at the head of which was an elective king. This elective king was assisted — or opposed as the case might be — by ten Ministers, two Royal Field Marshals (for Poland and Lithuania), two High Chancellors, four Chancellors, a High Treasurer and a Marshal of the Household. The king shared the supreme power with the Senate, which was composed of the two Archbishops, — the Archbishop

of Gnesen being Primate — fifteen Bishops, thirteen Palatines or Woiwodes of provinces and eighty-five Castellans. The national Diet was held every two years and the Senate was empowered to issue temporary ordinances pending the meeting of the next Diet.

The weaknesses of this imposing Constitutional structure were many, but the most fatal was, that the central Parliament never had the genuine support, as an institution even, of the classes represented in it.

The great nobles disliked it because it threatened their local independence and power; the *szlachta* or petty gentry, on the other hand, were too narrow in their outlook to support a national policy and in their turn opposed the Constitution as tending to restrict them too much in their local and provincial rights which alone they valued as affording a more important field for the assertion of their class "liberties". Moreover, the elective character of the monarchy afforded these petty gentry an opportunity for wringing new concessions from the Government. It had at one time, indeed, been customary to elect to the throne of Poland the heir of the reigning house. But this was not obligatory and every fresh election was made the occasion for wringing new concessions from the crown. In this way were legalized, as permanent elements in the Constitution, the principle of conditional allegiance and the right of "confederation" and rebellion which were the

prime causes of the lapse of Poland into utter anarchy.

Thus the ultimate determining cause of the downfall of Poland, as the Poles themselves have since recognized, was their failure to develop a true national consciousness. They were a conquering race which never amalgamated with the conquered peoples to form a united nation. The governing classes (pans) and the petty gentry (szlachta) alone had rights, privileges, and liberty; the rest of the population were treated as slaves, precisely as the Poles treated the peoples which they conquered. From this condition of affairs there naturally developed a régime that was marked primarily by its intolerable oppression. And what made the condition worse was the fact that the Polish peasant had at one time been a free man whose lot was as tolerable as that of the same class in the countries of western Europe. But in 1374 the Angevin King Louis granted to the nobles certain privileges by which the peasant were reduced to servitude, and from this time until the death of Sigismund II Augustus in 1572 a gradual system of spoliation went on, till in the end the serfs were robbed of every civil and political right. All the land, as well as the serfs living upon it, became the absolute property of the lords, who had the power of life and death over their slaves and uncontrolled jurisdiction within the often enormous area of their estates.

How they exercised it, we can judge by a quo-

tation given by the historian Lelewel from an eighteenth century writer. "The nobles", he said, "regard the cultivator and the plebeian as dogs; that is the expression used by these abominable men, who, if they kill a peasant, whom they call rubbish of the earth *(chlop)* say they have killed a dog".

This wretched system was extended by the Poles wherever they went. In Lithuania, at the time when the Grand Prince Jagiello became King of Poland, the peasants were free cultivators. But union with Poland meant for the Lithuanian peasant the speedy loss of his liberties and descent to a degradation equal to that of his Polish brother. Later, during the successive crises of Poland's fate, from 1772 onwards, the more liberal of the Polish nobles themselves saw the necessity of reconciling the peasants to the national cause. But, though much was said and promised, nothing was done, and it was not until after the final ruin of the cause of Polish independence in 1864 that the serfs were emancipated, not by the Poles, however, but by the Russians.

CHAPTER FIVE

THE POLITICAL UNITY OF SILESIA

IV. Justice of the Polish Claims Historically Considered

During the first half of the seventeenth century, under Sigismund III and his son Wladyslaw, Poland was still a great Power, the arbiter of the destinies of central Europe, the stronghold of Catholic influence in the North, and, in alliance with the House of Habsburg, the champion of Christendom against the Turks. But with the decay of religions that in all Europe followed the Thirty Years' War, this influence was greatly weakened, and full play was given to all the selfish instincts of Polish individualism. The monarchy was almost wholly deprived of power. The effective power in the Parliament was likewise destroyed, for the nobles refused to accept the principle on which all modern constitutional systems are based, that minorities must give way. This principle of obstruction had long been established in the provincial Diet and now came to be introduced into the National Diet, so that constitutionally, by the exercise of his *liberum veto*, any deputy could

wreck a proposal by simply rising in his seat and saying "I object".

This principle, indeed, was even carried so far, in the later years of the seventeenth century, that the right was acknowledged of any deputy to dissolve the Diet itself. Sigismund III tried in vain to introduce the principle of the majority. His efforts only led to a formidable insurrection which was only put down at the sacrifice of all further hopes of constitutional reform. So desperate a situation had by this time ensued that King John II Casimir warned the warring factions that some day they might make possible the dismemberment of their country. Said he, "Muscovy, Austria and Brandenburg might tear in pieces the headless body." This prophetic utterance was repeated only a few years later by another Polish King, the hero warrior John Sobieski, and reached fulfilment within a century thereafter.

Thus, repeated internal rebellion and insurrection were bound to lead to that weakness in external affairs which has so often in history marked the beginning of the downfall of great States. Indeed, the fall of Poland may be dated back to the Ukrainian uprising, against Polish overlordship, of the Zaporozhian Cossacks who had organized a State, over which Poland claimed suzerainty, in the region below the falls of the Dnieper. The Poles tried to make their sovereignty effective over this independent community by assigning the lands to Polish nobles

and carrying on a vigorous religious propaganda against the Orthodox faith. The Cossacks, under the Hetman Chmelnicki now waged vigorous war against their would-be masters, and when the fortune of war began to turn against them, appealed for help to the Tsar Alexius, as protector of the Orthodox faith, thus transferring their allegiance from Poland to Russia.

The war which followed ended disastrously for Poland. For a time all went well for the Poles, but their King, John II Casimir, just when he was at the high tide of success, was forced to conclude with Russia the "truce" of Andrussowo after a war lasting thirteen years. He was compelled to do so because the great lords of Poland did not hesitate to take advantage of the country being engaged in foreign war to use against the crown their right of insurrection.

It was the rebellion headed by the wealthy and powerful Prince Lubomarski that forced King John to conclude the truce followed by the Peace of Andrussowo in 1667, and that date is important in Poland's history because it marks the turning point in her fortunes. By the peace of Andrussowo, the overlordship of the Cossacks was divided between Poland and Russia, the frontier of Russia being advanced to the Dnieper. The holy city of Kiev was once more restored to its original Russian rulers and Poland was reduced within the limits which she retained until 1772.

This brief outline of Poland's political history and the causes of her decline would not be complete without some reference to the religious troubles and controversies arising out the Polish conquests. The Poles themselves were Roman Catholics. The peoples conquered by them, on the other hand, that is to say, their White Russian, Ruthene, and some of their Lithuanian subjects belonged to the Orthodox Eastern Church. In the year 1565, King Sigismund, with the view, as some historians assert, to the political advantages to be derived therefrom, accepted the decrees of the Council of Trent and invited the Jesuits to re-establish the faith in his kingdom which in the preceding century had suffered somes lapses owing to the rapid spread of Protestantism in the great Reformation movement of the time.

The Jesuits succeeded so well in their work that they created in Poland a most powerful and intolerant religious feeling which manifested itself in a manner such as to make of Catholicism, in the eyes of the Poles, the symbol and the guarantee of their national unity and race predominance.

Similarly, the Russians had accepted the Orthodox Greek Church as the symbol of their own superiority. There thus ensued, between Pole and Russian, a bitter contest whose object was the imposition of a particular type of religion upon the debatable frontier provinces that lay between the two countries.

Polish policy aimed to cut off the border provin-

ces from religious intercourse with Muscovy. This was achieved in 1595 by the so-called Union of Brest-Litovsk, proclaimed at the instance of the Metropolitan of Kiev under which the Orthodox communities in Poland-Lithuania were induced to repudiate obedience to the Metropolitan of Moscow and to accept the spiritual leadership of the Pope. The great Uniat Church or church united with Rome, thus created, which retained the Greek rite—i.e. ritual organization and discipline—while submitting to the Roman obedience, has remained ever since a bone of contention between the Russians and the Poles, whether in Poland proper, where it is strong in the Southeastern Ruthene districts (Cholm) or in the western provinces of Russia, from Lithuania—where the White Russian peasants largely adhere to it—southwards to the Ukraine, where it has become in some sort the symbol of Ruthene separation. From the Russian point of view, the Uniat Greeks were and are rebels against the Orthodox Church and Russian nationality to be reduced to obedience by any means; from the Polish point of view, the Union, which represents a sort of compromise with the national Catholicism, was and in the symbol of Polish predominance, cultural and, potentially at least, political. The Empress Catherine II compelled the Uniat Church, in the provinces annexed by her under the partition, to submit to the jurisdiction of the Orthodox Holy Synod and conform to the

Orthodox model, and this policy has been pursued further by subsequent Russian rulers.

From the brief account we have given of the origin of the Polish claims over White, Red and Little Russia, it will be seen that they are based entirely upon the aggressions of the latest Middle Ages, made by a race entirely alien to the Polish. It was the Lithuanian dukes, as above stated, who subjugated most of western Russia, with its old capital Kiev, and it was solely through the political union with Lithuania in 1386 that Poland derives title to the lands in question.

As stated by Edward Freeman, the English historian, in the year 1870: —

"In the latter part of the eighteenth century the three partitions of Poland brought about the all but complete recovery of the lands which the Lithuanian dukes had won from Russia.... It is important to remember that the three partitions (1772, 1793, 1795), gave no part of the original Polish realm to Russia. Russia took back the Russian territory long before won by Lithuania itself. In the Russian provinces the mass of people were still Russian, so they had often suffered persecution from Poland for cleaving to the Eastern Church."

If we analyze the causes that led to the downfall of Poland, we shall find that the chief of them, in addition to those to which reference has already been made, was the spirit of conquest and domina-

tion by which the Polish State was imbued from the beginning of its history. This was the inspiration of the nobles who formed the governing classes and who would permit the rise of no middle class. The country accordingly possessed no active and organized trading interest, no fixed revenues. Possessing no good geographic boundaries, the country permitted no regular army, no system of frontier fortifications. Thus, the nation, whose central Government was almost powerless; whose real rulers the gentry, had in their jealousy of one another sacrificed national and class authority to the individual, the Diet to the Veto; and whose wretched peasantry had no share in political life, and little indeed in social well-being—such a nation possessed neither the capacity to govern itself nor the strength to withstand the repeated shocks of internal dissension and rebellion and external conflict which it was fated to endure throughout its history.

CHAPTER SIX

THE POLITICAL UNITY OF SILESIA

V. Polish Claims to Upper Silesia Analyzed

The fate of Upper Silesia, according to the Treaty of Versailles, is to be left to a vote of its inhabitants. They are to decide the momentous question of whether the future nationality of Upper Silesia shall be Polish or German. Such a vote will no doubt, if fairly recorded, represent the *feeling* of the population. Thus, at least one factor determining the question of nationality will be utilized to demonstrate to the outside world what the truth of the matter is. But there are at least two other factors which have likewise to be taken into consideration, if the impartial searcher after truth wishes to arrive at a just conception of what nationality, as applied to a particular state or province, really involves. In the consideration of this question we find that most analysts of the subject have ascribed a large place in nationality to the questions of language and historical traditions.

Firstly, then, as regards historical traditions, Upper Silesia, at a time when the greater part of France

belonged to English crown, was, indeed, nominally Polish. This situation lasted from 1000 to 1163 of the present era, during which time an Empire had come to be established by the Poles founded by Boleslaw, the Brave, with an army consisting of lawless adventurers. The State he founded was not a national State, and when it was partitioned in 1139 by Boleslaw III among a number of independent princes there was no common sentiment to preserve or create the tradition of the subordination of particular and local interests to the national idea. And, accordingly, Poland remained for more than a century and a half split up into a series of rival principalities, until the greater part of it was reunited, early in the fourteenth century, by Wladyslaw Lokietek, duke of Great Poland, who in 1320 assumed the title of King.

Thus, the fact of belonging for a century and a half to the soon decaying dominions of Boleslaw the Brave was little suited to make any lasting impression upon the Upper Silesian people, at that time standing on a low mental level differing but slightly from out and out barbarism.

The release from a state of absolute slavery and barbarism came to the people only under the more enlightened rule of the free Silesian dukes lasting from 1163 to 1336. During this time, Silesia was completely Germanized, and when in 1336 and later again in 1339 the King of Poland, Casimir the Great,

with the approval of his magnates and bishops, definitively renounced all claim to Silesia, never again was there ever a question of its return to Poland, for the Silesian dukes had formally thrown in their lot with and accepted the suzerainty of the crown of Bohemia, even going so far as to support the latter in the ever recurring disputes that arose between that State and Poland.

Thus, with the instinctive consciousness that only from the direction of the German West could religion and civilization enter their lands, the Upper Silesian dukes joined Bohemia and thereby acknowledged the sovereignty of the German Emperors. Indeed, it is necessary to point out that from the days of Mieszko (960—992) till the close of the twelfth century, the German Emperors had claimed and often effectively exercised overlordship even over the Polish princes.

The assumption of Wladyslaw of the royal title in 1320 marked the definitive repudiation of this claim, but not the end of German influence, which continued to extend itself over territory and to attain new frontiers further and further eastward beyond the Oder where the process of Germanisation went on, always without the opposition and for a time even with the active encouragement of the Polish princes themselves. Already in 1289, Duke Casimir of Beuthen acknowledged King Wenceslaw of Bohemia to be his sovereign, and two years

later, the two dukes, Mesko of Teschen and Boleslaw of Oppeln, appeared before the Bohemian King in Olmütz and vowed solemnly "on a particle of the true cross 'war ban' against Poland."

All of these acts were, however, only preparatory to the final great act of renunciation made by King Casimir in 1336, already referred to. In 1526, as already stated, Silesia came under the rule of the German Habsburgs and in 1742 was annexed by Frederick the Great to the kingdom of Prussia.

We come now to the consideration of the question of language in connection with our inquiry into the nationality of the Upper Silesians. Here the result of 700 years' work of German civilization shows itself pronouncedly, for in Central Silesia 96 per cent of the inhabitants speak only German. In Upper Silesia, however, a Slavic dialect, the so-called *Wasserpolnisch (Water Polish)* is spoken among the laboring classes, chiefly miners and factory hands, who constitute a large part of the population in this predominantly industrial region. It is a language which is a mixture of German and Polish.

A large percentage of those who make use of *Wasserpolnisch* as a language, are likewise able to speak and do speak German, and certainly all but a very few of them understand German when they hear it spoken. It has been variously estimated that from 50 to 75 per cent of them make use of both languages.

Wasserpolnisch is to some extent the same sort of a mixed language or dialect as is "*Yiddish*", with this difference, however, that unlike "*Yiddish*" it has rarely been used for educational or commercial purposes, has no literature and lacks to a large extent the capacity of expressing abstract terms. The language of civilization, even among the poorer classes who employ *Wasserpolnisch* has been German for centuries.

But it is important to bear in mind that Upper Silesians who commonly employ *Wasserpolnisch* as a language are by no means, on that account, to be classified as Poles. The Poles from across the border cannot speak or understand the language of their alleged brethren in Upper Silesia and in the case of Polish agitators who have smuggled themselves across the border into Upper Silesia to spread the Polish propaganda, it is a well known fact that they have had to address their intended converts in the German language in order to make themselves understood.

An odd example which well illustrates this language difficulty was reported to the writer recently, during his researches in Upper Silesia. During the war when the Germans were in occupation of the purely Polish territory in Congress Poland, a certain individual, who earns his living acting as interpreter in the Upper Silesian courts in proceedings that require the interpretation of the written or spoken *Wasser-*

polnisch dialect, received permission to go to the front where he hoped to make an unusual profit out of the high wages that were being paid to Polish interpreters by the German army of occupation. After a few days' absence, the individual in question returned to his Upper Silesian vocation and with quite a crestfallen air admitted that he had abandoned the new job because he had been unable to understand the language spoken by the Poles.

In going about the country, the writer has often heard two people, for example mother and daughter, talking to one another, the one in German, the other in *Wasserpolnisch*. Up to the Bismarckian era and Bismarck's struggle against the Catholic Church (whose most loyal supporters are to be found in Upper Silesia), the Prussian Government took this state of things into account, the first instruction in the schools being given, to a large extent, in the native dialect. Then it was thought expedient to suppress it as far as possible. At the same time, only "reliable", that is to say, Protestant and Prussian officials were sent to the district. By these measures, a certain antagonism, not much heard of before, was established and exploited by the "Great Polish" agitation which began to spring into life. German and Protestant on the one side, and Catholic and Polish on the other side became synonymous terms. This agitation, however, did not originate

in Upper Silesia, but was inaugurated in Posen and Cracow. Nearly all the Polish protagonists who first turned up in the nineties came from abroad, *Korfanty* being a notable exception to this rule. For centuries, Polish intellectuals had not been interested in Upper Silesia at all, had done nothing for the civilization of the country, *Wasserpolnisch* being an object of derision with them. The inhabitant of Upper Silesia had not, for his part, taken any interest in the Polish insurrection of 1848. But with the growth of the "Great Polish" agitation, Upper Silesians were hailed as brothers and efforts began to be made to induce them to learn the pure Polish language. But the effect of these efforts was slight in view of the fact that the influence of the thoroughly German Centre (i.e. Catholic) Party predominated. Sincere and loyal national Poles, like Archbishop von Stablewski, even more or less publicly disapproved of the Polish agitation in Upper Silesia, as tending to compromise what they considered the good cause of the resurrection of a Polish State by combining it with a bad cause.

In an article which appeared in the *Kurjer Poznánski* (No. 229 of 1892), at that time the organ of the Posen Chapter, Archbishop von Stablewski wrote as follows:

"It appears unfit and unjustified to drag Silesia into the sphere of the political activity—the aspirations—of the Poles, so to speak, joined to Prussia

after 1742. The legal-political point of view of the Poles in the province of Posen is a totally different one from that of the Silesians. Silesia has been separated for over 700 years, practically and legally from the Polish Kingdom and cannot be considered by the residents of Polish descent as a district for political activity in the "Great Polish" sense. The people of Silesia are entirely lacking every historical (Polish) tradition. We oppose entirely a political agitation concerning Silesia from among our midst in any direction." This was the state of things when the war broke out.

One has only to pay a visit to the two countries, viz., Upper Silesia and Poland, to perceive what a gulf separates the inhabitants of the two regions. We are speaking, of course, of the *Wasserpolnisch* element in Upper Silesia and not of the *purely German* part of the population which number nearly 50 percent of the aggregate. In their social structure, bodily frame, language and mental disposition, the Upper Silesians show a marked difference from the Polish tribe(?)Whereas, in Poland, the nobility is everything and one tenth of the whole population hold themselves to belong to the gentry, there is no native aristocracy in Upper Silesia at all. The Upper Silesian has always shown an aversion to the "High Poles" of Poland and to the irredentist Poles of Posen, just as the Poles in Posen speak contemptuously of the Upper Silesian "Odrak"

(inhabitant of the Oder lands) so far as they deign to take notice of him at all.

From all this it must be clear how incorrect it is to speak of the population of Upper Silesia as divided between *Germans and Poles.* Such a classification may be correct in Posen, Galicia and in Congress Poland but gives an entirely wrong impression when applied to Upper Silesia. Accordingly, when we study the census figures, as for example the census of 1910, in the governmental district of Oppeln, by which term the present autonomous province of Upper Silesia was officially designated, we find an enumeration of 884,045 Germans and 1,169,340 Poles *. But we have to bear in mind that the latter figure means simply that there are in the district 1,169,340 inhabitants who speak the Polish language, or rather, a corruption of the Polish language known as *Wasserpolnisch* and who are either of Polish descent or of mixed Polish and German descent. Included in this figure are also a small percentage of pure Poles who have emigrated into the Upper Silesian country, for the most part to improve their condition in their new

* If it is wrong for one million Poles or alleged Poles to have to live in Germany against their wishes will it be right for nearly two millions of Germans to have to live in Poland against their wishes. For, if Upper Silesia is annexed to Poland there will then be, according to statistics, 1,859,279 Germans residing in Congress Poland or 21 per cent of the population. In Germany, before the war, only 5.7 per cent were of Polish origin.

home and who have, therefore, voluntarily abandoned their native land. The Upper Silesian, even if his ancestors were once Poles, is a rare individual who voluntarily calls himself a "Polak", signifying that he avails himself of the Polish language only. This fact is emphasized in order that the reader may arrive at a clearer understanding of what the true relations of the Upper Silesian to the Pole really are.

The Polish journal "Dziennik Slaski" writes in 1912, "It is true that parents are nowadays of a different opinion. With the changing of circumstances, people too have changed. We have had German schools in Upper Silesia for 40 years; consequently 40 annual courses have participated in German instruction in the schools. Moreover, the number of German citizens has increased enormously through immigration of officials and tradespeople. This change in the make-up of the population must in time exert a considerable influence on the opinions of parents with regard to the German language. He who knows the prevalent conditions among the people, is aware that a large part of the Upper Silesian parents talk German with their children, teach them the Lord's Prayer in German, and that Germans papers and periodicals are being read in the families, that the parents like to take part in German entertainments, that they join German and not Polish unions and societies. The clergy make the observation that many fathers who play

the part of radicals at election time, in spite of it, send their children to German instruction, that young people, though having been taught in Polish and to confess in that language, yet ask for banns and marriage in the German language. He who denies this simply does not know the conditions."

The foregoing excerpt correctly describes the conditions in Upper Silesia, save only that it is not correct to convey the impression that the lack of Polish national feeling dates back only 40 years. The truth is that there has been no Polish national feeling in Upper Silesia for seven centuries.

As regards the teaching of German in the schools, we have already called attention to the fact that, prior to the Bismarckian era, instruction in the schools had been given, to a large extent, in the native dialect. As a matter of fact, before that time, instruction through a period of 150 years had been bi-linguistic, and in the Middle Ages instruction was given in the towns in both the German and Polish languages.

Coming down to very recent events, nothing could more clearly establish the proposition we are now advancing, namely, the lack of Polish nationalistic feeling in Upper Silesia, than the fact that since the Revolution (1918), parents availed themselves very little of the opportunity accorded them of sending their children to Polish religious instruction when the new Government in Prussia admitted and pre-

scribed it. The Polish papers bitterly complain of this. Inquiry in the schools had the following results: Of 250,000 pupils whose mother tongue is non-German only 94,000, i.e. 37 per cent demanded anything but German instruction. Of the aggregate school population this constitutes only 22 per cent. A school principal writes:—

"For participation in Polish religous instruction, 62 pupils in the whole of our school had given in their names; the instructing teacher informed me soon after the first lesson that the children did not understand him and did not know the simplest Polish words. He was therefore often obliged to take refuge in the German language. Moreover, the teacher told me that no child was able to recite a Polish prayer. In the next Polish lesson I was present during the lesson and found the teacher's statements fully confirmed." The religious teacher adds, "The number of children participating in Polish instruction constantly diminishes, because the children as they weepingly explain find Polish too difficult."

CHAPTER SEVEN

THE POLITICAL UNITY OF SILESIA

VI. Final Analysis of Upper Silesian Nationality

What, then, is the nationality of the Upper Silesian? This question, in the opinion of expert ethnologists who have studied the conditions in this region, is susceptible of one of two answers, according to the weight which may be given by the one or the other authority to the leading factors that go to make up nationality.

Firstly, the opinion of those who maintain that the Upper Silesians are German by nationality. This opinion is based upon the preponderance of historical tradition and popular feeling as factors of nationality over the factor of language as regards which there is not the same unity in Upper Silesia as exists with respect to the two first-mentioned factors. But even as regards the question of language, these authorities cite such facts as we have hereinabove set forth, to show that the German language influence among the Upper Silesians is far stronger than the influence of the Polish language. Nor is it any answer of the Pan-Poles to claim that this preponderance of

the German language influence has been created by artifical Government stimulation, for it is an undisputed fact that up to forty years ago both languages were taught in the schools and no efforts were made to Germanize the population by Government regulation. In other words, the argument is that 700 years of life under German rule has ineradicably fixed the nationality of the Upper Silesians as German and that this applies to all three factors which go to make up nationality, viz., historical traditions, language and the feeling or sentiment of the population.

On the other hand, it is contended by other experts, who, without disputing the main premises upon which the foregoing opinion is based, reach a different conclusion, that the nationality of the Upper Silesian is *sui generis*, and that one may designate it merely as "Upper Silesian". They assert that the Germans and Poles (so-called) in Upper Silesia are not two different tribes, but one tribe, a mixed race, who in the country talk almost exclusively a mixed Polish dialect *(Wasserpolnisch)*, and in the towns mostly German. Very often, these authorities point out, brothers and sisters talk different languages as a result of their marriages and their place of residence. There is in Upper Silesia, they assert, not one Polish-speaking family who has not German-speaking connexions by blood or marriage. Take the case of a country family, whose son settles in town; he marries a burger's daughter and carries

on trade; he becomes German without further ado, even if he retains *Wasserpolnisch* or Polish as a language for trade intercourse whenever needed. On the other hand, it often happens that a townsman removes to the country and marries a land-worker's daughter. He then quite naturally talks *Wasserpolnisch* in his family, but without forgetting or giving up his German, which for the Upper Silesian is absolutely unheard of. Everywhere, in the streets and highways, in town and country, in the factories and the mines, in trams and railway carriages, one constantly hears both languages talked, and the very same persons may utilize, according to the occasion, either German or *Wasserpolnisch* and some few even Polish. As regards pure Polish, emphasis is laid upon the fact that it is an extremely rare thing to hear the pure or *High Polish (Hoch polnisch)* spoken in Upper Silesia.

It is, accordingly, this latter school of ethnologists, whose findings or opinions constitute the favorite arguments of an influential class in Upper Silesia who favor the proclamation of an independent Upper Silesian State. But even this class favor this solution of the Upper Silesian question, only as the lesser of two evils. That is to say, that as between the choice of absorption in Poland, or independence, they would choose the latter alternative, as being less of a danger to the cultural, economic, and industrial development and existence of Upper Silesia

than would be its inclusion in the Polish State.

From all this, it is to be noted, in the first place, that a case may be made out for the proposition that the Upper Silesians are German as to nationality; and, in the second place, that a case may be made out for the proposition that the Upper Silesians constitute a nationality *sui generis,* entirely separate and distinct from either the German or the Polish nationality.

With these two ethnological opinions it is possible to reckon, but the writer has yet to hear of any reasonable arguments which are able to satisfy an impartial investigator that the Upper Silesians are in reality by nationality Polish. Nor are there any facts to substantiate such a claim.

Indeed, had it not been for the calamities that overcame Germany as a result of the war and the terrible distress suffered by the entire population, this nationality question would have seemed absurdest of all to the Upper Silesians themselves. Hunger and deprivation had, however, reduced these people to such a state of moral apathy, that, for a time, Polish agitators from across the border were able to promulgate their propaganda and to stir up certain baser elements by specious promises of great future rewards, without meeting with that prompt check and counteracting influence which, in normal times, would have rendered the movement impossible from its inception. For, among their other characteristics,

the Upper Silesians have always displayed great loyalty to their Fatherland, and it is stated, on competent authority, that during the recent war there were in the entire German army no troops more loyal to the colors than were the Upper Silesians.

Reference has already been made to the fact that a certain amount of Polish agition was already being conducted before the war. The question of how much of success that agitation had in Upper Silesia is effectively answered by an examination of the results obtained at the popular elections to the Reichstag in 1907 and then five years later in 1912.

In view of the fact that under the Prussian franchise act all male citizens over 25 years of age were entitled to exercise equal, direct, and secret voting rights, the comparison may be regarded as fair in every particular. The results were as follows:

Polish Candidates		German Candidates	
1907: . .	118,733	1907: . .	172,689
1912: . .	111,526	1912: . .	208,334

Still one more test will serve to demonstrate how little effect this Polish nationalistic agitation has had upon the Upper Silesians, even when conducted under the most favorable circumstances for its spread, namely, in the conditions that existed after the war. In the elections for the National Assembly in 1919, the entire nationalistic Polish press incessantly advised

the Upper Silesian voters not to go to the polls. They declared that whoever cast his vote at these elections would be proclaiming himself a German and would be committing treason towards the interests of the Polish race.

The answer of the voters at the polls was unmistakable. The appeal proved a boomerang, for 60 per cent of all voters voted German. And even this figure did not show the full strength of the German vote, for, among the 40 per cent of non-voters were not only the pro-Polish element but likewise the Spartacist element who, for reasons of their own, had likewise boycotted the polls. Normally, a large percentage of this Sparticist element would have voted for one or the other of the German candidates. It is believed, moreover, that included in the 40 per cent were perhaps ten per cent who, though German-voting, were prevented, for one reason or another, from exercising the franchise. From this it would appear that, at the most, the pro-Poles can reckon on no more than 25 per cent of the legal voters.

The principal result, indeed, of this abstention from voting, was to show a higher percentage of return for the Moderate and the Independent Socialists, in view of the fact that the majority of those who abstained from voting were supporters of the Centre Party.

The result of this vote surely demonstrates that

the Upper Silesian workman has no stomach for the nationalistic policies of the Pan-Polish agitators. Indeed, it showed something further. In the last analysis, the vote for National Assembly candidates in Upper Silesia must be accounted to demonstrate that economic considerations played an important part in the outcome of the voting. In other words, the greater part of the Polish laborers supported radical Socialism rather than nationalistic Poledom. The latter they discarded because they knew and feared its evil consequences. If conditions in Germany had been bad, they knew that across the border in imperialistic Poland they were even worse. Where Germany's condition required only the restoration of peace and good-will to the world in order that she might recover her usual stability, in Poland the outlook, as pictured by fugitives from the war zone and by returning deserters from the Polish Army, was black and growing constantly blacker. Indeed, Poland was a country in which it might truthfully be said that conditions for the workingman and the peasant had grown to be practically unlivable.

Having the contrast in these conditions in mind, it is by no means surprising that the Upper Silesian rejected the incitements and advices offered to him by the representatives of Greater Poledom from across the border, and calmly proclaimed himself, as usual a German by voting for his German candidates.

CHAPTER EIGHT

THE POLITICAL UNITY OF SILESIA

VII. Contrast of Conditions in Poland and Germany

In continuation of the facts and arguments presented in the preceding pages, we now come to the consideration of certain other reasons why the Upper Silesians, whatever their antecedents may be, will always prefer to cast in their lot with Germany rather than with Poland.

Mentally and morally the Upper Silesians, as they themselves are perfectly aware, are vastly superior to the Poles of Congress Poland or of Galicia, and accordingly they have little desire to darken the future life and welfare of themselves and of their descendants, by becoming part of a nation which stands upon a lower plane of civilization. That Poland does in fact stand upon a lower level is abundantly established by statistics as well as by the facts known to every investigator or observer. For example, according to the Polish statistician Grabski, there are in Russian Poland 590 illiterates per thousand of all persons over nine years of age;

in Galicia 406 per thousand. On the other hand, in Upper Silesia there are but five illiterates per thousand.

In Upper Silesia, the percentage of illegitimate births amounted, according to the statistician Krose to approximately five per thousand. In the Polish city of Lemberg, on the other hand, of 6129 births, approximately one-third were illegitimate. Similar conditions obtain elsewhere throughout Polish territory. In Russian Poland, particularly, it is a well known fact that the standard of morality is very low and that prostitution, drunkenness, gaming, and even more degrading vices flourish in a manner and to a degree absolutely unknown in Upper Silesia. Thus, the famous Polish author Sienkiwicz writes:— "Our people, compared with the Western nations of Europe, stand, as regards ethics, on a very low level. Here I do not refer only to our unbridled passions, nor only of our cities. But let us look at the Polish villages, especially in the old kingdom. Undoubtedly, ignorance is partly to blame for this corruption, yet we know that it is not the political conditions which have shaken the faith of the people, for the country population themselves complain that unchastity and degeneration, deceit, wickedness, incendiarism, hatred and theft have greatly increased among the common people, How often one can observe that even those of the country population who overstep at every turn the commandments of God and the Church, are yet faithful in their attend-

ance at Church and in the practise of the usual rites of the Church. By this it is undoubtedly proven that their faith is dead, and that they now practise it only mechanically, observing certain rules (fasting) and Church ceremonies".

This conviction of the low moral level of Polish society, under non-German Government, Sienkiwicz also expresses in his modern novels, *Without Dogma, The Family Polaniecky* and especially in *Wiry.*

A distinguished Polish authority, Professor Kalina, writes as follows:—"We call to mind the reports of educational conventions in Galicia and in Poland which unveiled the terribly low level of morality in the schools, not only in the middle, but also in the primary schools, in which children only ten years of age suffer from infectious venereal diseases. In the middle schools, the percentage of such cases is still higher. But immorality is not only confined to the sexual life. Everywhere complaints are heard about disobedience in the schools, irreverence, thefts, suicides. Everywhere we have contagious diseases which result from the low moral temperature; therein is the cause, too, that we have no public moral opinion whatever."

Another Polish author, Kasimir Bisrzgtgya, writes in *Glosy Katolickie* (No. 101), as follows:—The Czechs are famous for their musical gifts, the Jews for business capacity and thrift, the Germans for the spirit of order and enterprise, France for fashion,

America for large fortunes. But wherein is Galicia distinguished before the world? By misery—only misery. One need only go into the first cottage of a peasant in order to clearly see the misery of our people. How miserable are the hovels of the people in the country, and the tenements of the workmen in town. Sometimes stables are the veriest palaces compared to them. And what is their food? In East Galicia, maize groats in the morning, maize groats at noon, maize groats at night. And in West Galicia? Potatoes or greens, morning, noon and night. And how do they dress? I knew a hamlet near Stanislaw where the people slept on a sack, covered with a sack and dressed in the sack in order to drive the cattle out. And this wretchedness is owing to the alcohol taverns. It is incredible, but true, that our people in Galicia carry annually 50 millions of gulden—that is 100 millions of crowns to the taverns and the same may be said of Congress Poland."

One has only to traverse the industrial districts of Upper Silesia, where most of the population are the mine-workers of the mixed Polish race, to see what a contrast to the above pictured conditions exists in these neighborhoods. The housing conditions for the miners and their families are uniformly good and in some districts where more advanced social measures have been adopted by the mine-operators, the housing conditions are more than good. One can see in the principal mining districts,

in the vicinity of Beuthen, Kattowitz, Myslowitz, Miechowitz, Hindenburg, Nikolai, Rybnik and Romanshof, mine-workers' colonies consisting usually of two and four-family cottages the beauty of which must be seen to be appreciated. The houses vary in style and structure—a pleasing relief from the usual monotony of sameness to be found in dwellings devoted to the working classes. Each house has its garden, its trees and shrubs, its flowers and its attractive vine-covering. In a number of cases, these colonies are built in the midst of the woods, in healthful and beautiful surroundings. If a stranger were to be set down in the midst of one of these colonies (let us say the more recently built colonies of the Emma Mine at Romanshof) without knowing what they were, he would be inclined to regard them as a group of country villas occupied by rich people. The houses are four-family houses. The interiors are spacious, bright and clean. A dwelling may consist of a kitchen and a living and sleeping room, or of a kitchen and two other rooms, depending upon the size of the family. Each dwelling has reserved for it both cellar and garret space. Stoves and hearths are provided, stair-landings are tiled. The roofs are covered with red tiling and give an extraordinarily picturesque appearance to the houses under their green covering of vines and against the background of the neighboring woods. The foundations are very solidly constructed of

concrete or of heavy building-stone. Each dwelling has its own toilet facilities, water-closets etc. Each four-family house is provided with a garden, covering a space that runs from 120 to 150 square metres. The entire colony is provided with sewerage, running water and fire-hydrants. The rents charged for the smaller dwellings run from 7 to 9 marks per month and from 9 to 11 marks per month for the larger ones. At the present time these rents are but a fraction of what each miner earns in a single day. Other colonies that are especially noteworthy are those of the Römer Mine at Niedobschütz in the Rybnik district, the Anna Mine at Pschow, the Dubensko Mine at Czerwionka, the Fürsten Mine at Wessolla, the colonies of the Emanuelssegen Mine, of the Hohenzollern Mine, the Paulus Mine, the colony Kostuchna, the Myslowitz Mine colony, the Oheim Mine, the Max Mine at Michalkowitz, the Nikisch colony, the colony Gieschewald, the colony of the Donnersmarck foundries, the Knurow colony, the Rokittnitz colony. The foregoing list is by no means exhaustive, and space forbids mention of further details about these colonies, each of which has been constructed in accordance with original designs and without any stereotyped formulas that might restrict the architect and builder in the development of their plans. Indeed, nowhere else in the world, whether in Pennsylvania, in Illinois, in England or in France has the author seen mine-

workers living under such ideal conditions as in Upper Silesia, and he is fully convinced that the vast majority of the mine-workers themselves realize that to exchange these conditions, established in accordance with the liberal and far-seeing methods of the German industrialist and mine-operator, and maintained in the midst of institutions that owe their establishment, stability, orderly conduct and high moral and educational value to the progressive achievements of the German people—to exchange such conditions * for those which the mine-workers know exist beyond the border in Poland, would be voluntarily to make the choice of poverty, misery and degradation as an acceptable substitute for prosperity, contentment, well-being, orderliness and comfort. It cannot be possible that the Upper Silesians will ever make such a choice.

* Some criterion of the contrast of conditions in the two countries is furnished by comparing the average prices of farm lands in Germany and in Poland before the war. Statistics show that the average price per hectare (about two and a half acres) of farm land in Congress Poland was 330 to 405 marks, whereas the average price in the Prussian province of Posen, now annexed to Poland was 1445 to 1750 marks per hectare, and in Prussian Silesia 2185 marks per hectare. In Polish West Galicia the prices run from 640 to 1330 marks, and in East Galicia the average price of a small farm-holding does not exceed 800 marks per hectare. Similarly the production of crops, such as wheat, rye, barley, oats, potatoes and beets shows a five yearly average (1906—10) of over one-third greater yield in the Prussian provinces adjacent to Poland as compared with the latter country. In the case of beet-culture the Prussian yield is more than one hundred per cent greater.

CHAPTER NINE

THE POLITICAL UNITY OF SILESIA

VIII. Incapacity of the Poles for Self-Government

That the Poles lacked the capacity for self-government in the past, a study of their history amply proves. That they lack it in the present is established by the gross failure they have made of their opportunities in Galicia where autonomy had been theirs, as part of the Habsburg monarchy, for nearly half a century.

In 1861 the Emperor Francis Joseph granted to Galicia a constitution with a Diet—complete autonomy was not obtained but it was granted in so large a measure that it was regarded as only a question of time when Galicia should become practically entirely self-governed.

At the outset of the Polish insurrection of 1863, the attitude of Austria towards the Poles was more than friendly. Now, however, the Poles in Galicia joined up their activities with those of the Polish refugees who had fled thither to escape Russian vengeance, and international complications threatened to ensue. Accordingly, Austria suspended the

new Constitution and in 1864, in consequence of an insane attempt of the terrorist National Government at Warsaw to foment an insurrection in Galicia itself, martial law was proclaimed and was enforced for more than a year with great severity.

The Poles in Galicia now began to moderate their political point of view to conform to the force of circumstances and there ensued an effort on their part to give full play to the Polish nationalistic sentiment without directing it into channels which might lead to treasonable action against the Habsburg monarchy and prevent the full development of Polish nationality *within* the Monarchy. In the Austrian Parliament, the Polish deputies, accordingly, opposed both a centralized system of Government and likewise a federal system, then much agitated on the basis of the recognition of the various nationalities within the Monarchy. The Poles thus barred the way to the creation of a federal organism, on the plea that to support such a plan would be to stand in the way of their larger aspirations for a free and independent Polish State. In this stand of the Poles they placed themselves in direct opposition to the Czechs who, as supporters of a federal system, wished thereby to see a restoration of the Kingdom of Bohemia, and a settlement of all differences of the Slavonic peoples living under the Austrian crown whereby the future peace of the Monarchy might come to be assured as well as the permanency of

its good relations with its neighbors. The opportunistic and narrowly nationalistic attitude of the Poles, however, brought the fulfilment of this great project to an unsuccessful issue, and never again was there to arise an equally favorable opportunity within the Monarchy to attain the consummation of a plan, which, had it been adopted, would in all probability have solved many of the perplexing questions which afterwards gave rise to the outbreak of the Great War.

As a reward for their opposition to the federalizing system, the Monarchy now granted to the Poles of Galicia certain concessions. There was to be in the Cabinet of the new Austrian Government a special Minister for Galicia; a separate board was set up for Galician education; Polish was to be the language of instruction in all secondary schools; Polish was substituted for German as the language of the administration and of the law-courts.

Not satisfied with these concessions, the Poles in 1868 presented an address to the Crown demanding the completest measure of autonomy, and a parliamentary duel ensued, between the Polish block of deputies and the Government, over the question of the new Polish demands. The Government yielded one thing after the other. In 1868 Polish became the language of the University of Cracow; in the summer of 1869 numerous German officials in Galicia were replaced by Poles and Poles alone

were to be appointed as teachers in the Universities of Cracow and Lemberg. From 1870 onwards, Galicia was permitted to be entirely Polonized at the expense of both the German and Ruthene elements, whereupon the Galician Poles began to agitate again and to preach revolutionary doctrine. To cap the climax, a Congress was summoned to meet at Lemberg in August 1870 of which the object was to formulate a program for the reunion of the Polish Kingdom.

Thus, once more the Poles of Galicia who had sworn allegiance to the Habsburg Monarchy and who had received the fullest measure of autonomous rights at the hands of the Monarchy, stood revealed to the world as traitorous subjects. Nevertheless, they continued to play their part within the Monarchy as the allies of every species of reaction and the supporters of the throne in its resistance to the liberalizing measures of the German Liberal majority in the *Reichsrat*.

Thus, it was the assistance granted by the Poles which made it possible for the Monarchy to overcome the opposition of the German Liberals in the *Reichsrat*, to its policy of occupying Bosnia and Herzegovina in 1877. For the second time, therefore, within a period of ten years the Poles had been the decisive factor in opposing measures which in all probability would have saved the Austro—Hungarian Monarchy from ultimate disaster and the

world from the most catastrophic calamity in all its history. Had the Monarchy failed in its opposition to the plan for a federal system in 1867 and had the German Liberals succeeded in 1877 in their opposition to the occupation of Bosnia-Herzegovina, we may be assured that the fatal Balkan politics which were played for three decades prior to the outbreak of the Great War would have lacked a breeding ground upon which to develop to fruition.

The Galician Poles had now succeeded in attaining all of their essential demands and by a series of administrative measures the Polish aristocracy were made supreme in Galicia.

How, then, did they use this power? Aside from a revival of Polish culture which accompanied the growth of Polish autonomy, and which was fostered by the Academy of Sciences, founded in 1870 at Cracow, there is little of constructive development and progress that can be ascribed to the efforts of this newly arisen Polish Government. Indeed, there was an utter absence of economic reforms such as changed the face of Russian and Prussian Poland. The peasants were kept in brutish ignorance; the interests of the towns were neglected and there was no effort made to create a Polish middle-class of merchants and traders—positions which the Polish Jews had been forced, by circumstances, to occupy because their activities in other directions had been rigidly circumscribed. Moreover, the Poles of Galicia,

only so recently freed from oppression, now used their newly-won liberties to oppress their own minorities—the Ruthenes and the Jews*—the result being, the development of a conflict which was destined to have a momentous influence on the causes and issues of the Great War.

The Poles feared the Ruthenes (Ukrainers), a branch of the Russian race, because they had taken part in the great Ukrainophil movement, involving 30,000,000 members of their own race, which threatened to endanger the ascendancy of Polish culture and influence in the provinces of Podolia and Volhynia, (Russian territory coveted by Poland as part of her future Great Poland), and likewise in East Galicia and even in the southeastern districts of the Congress Poland.

Accordingly from the moment when the Ukrainophil movement began to make itself felt, the Poles of Galicia renewed their seditious and traitorous political methods in the interests of a future Great Poland, and made overtures to Russia for the lending of their political support to the Russian State at a time when war between Russia and Austria seemed imminent (1912).

The Ruthenes of Galicia, on the contrary, made a declaration of loyalty and support to Austria. The Austrian Government, however, in the face of

* For status of Jewish population in Upper Silesia see *post* Appendix C.

the disloyal and disastrous attitude taken by the Galician Poles, exhibiting its usual weakness, attempted to be conciliatory towards the latter. It was in vain that the Poles were appealed to and in spite of the amicable attitude of the Austrian Government with respect to their disruptive practises, they continued to coquet with Russia and to offer up stout resistance to the Ukrainophil movement.

Perceiving the growth and vigor of the movement and the failure of all attempts on their part to smother it, the Galician Poles now gradually began to draw away from Austria and to throw in their lot with Russia, for their ascendancy in Galicia had received a severe shock, and in Russia they perceived the friend who would help them against their new enemies. In other words, the Poles feared the establishment of an independent Ukraine State more than they did the possibility of themselves being entirely swallowed up by Russia. It was the Ukrainian Cossacks who had forced the Poles to accept the Peace of Andrussowo in 1667, which had deprived them of their Dnieper provinces and the city of Kiev. As previously pointed out, this date was a turning point in Polish history and from this disaster the Polish State never recovered. It is probable that the Poles in 1912-13 had not forgotten the lesson of 1667.

These facts are cited here because they are inextricably bound up in the ultimate solution not

only of the Polish question but also of the Russian question and of the Upper Silesian or German question. For, in view of the past actions, insurrections, incitements and seditions of the Poles, it must always continue to remain a matter of doubt in the minds of statesmen as to whether any solution of the Polish question, having due regard for the rights of other nationalities, will content the Polish nation to devote themselves to the constructive work of building a stable and prosperous State—a State from which the poisonous virus of militarism and imperialism has been eliminated. Unless the Poles do accept such a solution, then, certainly, the peace of the world will continue to be disturbed to such an extent that even those nations who are now Poland's greatest wellwishers will be compelled to exert their influence and authority to keep the Polish State within bounds, failing which there could be no other solution than another partition—for, the peace of the world will demand a settlement that *is* a settlement and will not tolerate that many nations be wronged in order that the rights of one people be determined in accordance with a viewpoint set up by themselves and disregarding the point of view of others who have an equal right to be consulted.

CHAPTER TEN

THE POLITICAL UNITY OF SILESIA

IX. The Linguistic Question in Upper Silesia

Except for the unsuccessful attempt instituted by Bismarck after 1872, at the time of his fight against Catholicism *(Kulturkámpf),* there has never been any effort made on the part of the Prussian Government to Germanize the Upper Silesians by destruction of the distinctive Upper Silesian type, nor by the prohibition of their right to use their mixed Upper Silesian dialect, known as *Wasserpolnisch.*

In truth, it has always been recognized that there was an impediment to the spread of an effective culture among those who chose to avail themselves of the *Wasserpolnisch,* due to the fact that this mixed dialect of the Upper Silesians possessed no literature and was gravely lacking in many of the requisites for promoting ready intercourse with foreigners and even for purposes of elementary instruction in the schools and churches. At the utmost, the Prussian Government had for its aim, to transmit education to the people by prevailing upon them to learn, beside the *Wasserpolnisch* dialect, a written

language, namely, German. In 1764, 1766 and 1769, royal decrees were issued which introduced in the Upper Silesian schools, German side by side with Polish. As regards religious instruction, the clergy, because of their high-school and college studies, had universally received their education in the German tongue and for the most part preferred to impart instruction in German.

The reason for this lay in the fact that necessarily a better conception of religious ideas could be imparted in German than in *Wasserpolnisch* or Polish, for, the latter language, particularly the dialect employed by most Upper Silesians, was lacking both in the idea or thought and in the expression or form with which to clothe religious beliefs and views. Furthermore, it had become a proven fact, that the majority of Upper Silesian school children get into German surroundings in after life, and this afforded an additional and very weighty reason why it was felt among the clergy to be more profitable to impart religious instruction in that language which was employed throughout the realm for the administration of religious rites and which, therefore, afforded the highest opportunity for professed followers of religion to receive in any place and upon any occasion the administration of those religious rites which are necessary, in a religious sense, to all who are believers.

When Upper Silesia, after the Silesian wars of Frederick the Great, finally came under Prussian

rule in 1745, the condition of the common people was a miserable one. They were sunk in ignorance, and much vice and drunkenness prevailed. The reason for it lay in the fact that under the system of "serfdom" which still prevailed, the peasant or cottager had to cultivate the fields of his feudal patron and received little compensation for his labor. The liberation from serfdom was instituted in 1808 by the Prussian Minister vom Stein and immediately thereupon there was introduced in Upper Silesia a more advanced educational policy which in course of time had great influence in affecting a marked improvement in both the mental and moral outlook of the people.

We believe that sufficient facts have now been adduced in the preceding pages to make it clear that the German people and Government had from the beginning evinced a special and energetic interest in the welfare and development of the Upper Silesians. Indeed, throughout this constructive period in Upper Silesian educational reform, much interest was taken in preserving to the Upper Silesians the use of the Polish language wherever it was desired. What is remarkable about this fact is that it was *German* educators, writers and religious teachers, both Catholic and Protestant who thus defended the use of the *Wasserpolnisch* dialect in Upper Silesia, but never during all this time nor until the Upper Silesians became the play-ball of the "Pan-Poles"

from across the border, for political purposes, have any of these "Pan-Poles" or "High-Poles" taken the slightest interest in the Upper Silesians or in their language or literature.

Indeed, for centuries the need of the Upper Silesian people, to read and understand the German language, had been taken for granted. Prior to its incorporation with Prussia, Upper Silesia had been an Austrian province, and its people were addressed by the Austrian authorities in the German language, and all written communications to the people were made in German. In adopting the same course of procedure, after Upper Silesia was taken over by Frederick the Great, Prussia merely followed in Austria's footsteps and continued a policy which had existed and had been accepted by the people from time immemorial.

Under such circumstances it is, of course, not to be wondered at that the Upper Silesian people looked upon German as the language of culture and authority and that for the most part they were both willing and anxious to acquire at least a working understanding with the language.

Government pressure has never in the least been necessary to bring about the use of German by the Upper Silesians, for the advantages to every inhabitant from the use of the language are only too clear because of its practical utility in the matter of daily intercourse in a district in which the purely

German element differs only slightly in numbers from the non-German and dialect-speaking inhabitants and in which the middle and upper classes are so preponderatingly of pure German descent.

That the Prussian Government understood this fact is clear from the liberal measures taken to ensure the use of the Polish side by side with the German language. As evidence of this, we quote the remarkable decree issued by the Prussian Government under the hand of Minister von Altenstein in 1822, which served as the rule of conduct for Prussian Polish politics down to Bismarck's attempt to regulate the matter in 1872. The decree runs as follows:—

"Concerning the spread of the German language, it is, in the first instance, necessary to be absolutely clear whether the aim is that the inhabitants have an understanding of the German language aside from their native dialect, or whether the aim is to Germanize the people gradually but completely. According to the views of the Government, only the first proposition is desirable and attainable, the other is unattainable and not to be recommended.

"In order that the Poles may become and remain good subjects, it is to be our aim and it is regarded as necessary that they understand the language of the Government. On the other hand, it is not necessary that, on this account, they renounce or neglect their mother tongue. Religion and language are the greatest sanctuaries of a nation; on these

rests their whole manner of talking and thinking. A Government which acknowledges these sanctuaries. esteems and loves them may be sure of winning the hearts of its subjects."

With respect to the linguistic question in the schools, the educationalist Remschmidt published in 1834 an essay upon, "The spread of the German, language in Upper Silesia." He states that the use of the German language had greatly increased in the past 50 years, and that the towns were already fully Germanized. German settlements, military service, the mining industry and the elementary schools, had contributed to this. At his instigation and suggestion, Polish-German text-books were sanctioned by the authorities and introduced into the schools.

That even the Polish nationalistic elements in Upper Silesia were satisfied with the Government's educational policy is shown by the comments of their writers and leaders. Notably, Father Skowrowski, a Polish Upper Silesian poet and political writer, commends the Prussian Government for the benevolent policy it was pursuing towards the Poles. He asserts that in schools, in the courts and in administration the just principle of the use of both languages was being followed.

In 1848, a "Society for the Enlightenment of the Upper Silesian People" was founded by Karl von Koschützki, a German Protestant nobleman, with the aid of the Upper Silesian educator, Joseph Lompa.

Under its auspices, a renewed petition to the king of Prussia requested the granting of a Polish edition of the official Gazette, use of both languages for all officials, purely Polish teaching in purely Polish places, instruction in Polish in all colleges and seminaries. A part of these demands had already been granted and the rest were now fully granted as a result of the petition with the exception of the demand for purely Polish teaching in Polish places, a demand which even the most radical of nationalists must recognize as utterly unjustified since, whatever the language spoken, these places were all a part of Germany.

It was at about this time that the Upper Silesian people were represented in the Prussian Parliament by a very vigorous advocate and defender of minority rights and privileges, a priest from Beuthen—Father Schaffranek. His independence and courage made a deep impression on his political opponents and his zeal carried him even beyond the restraining influences which were sought to be put upon him by his superiors in the Church.

In the Prussian Parliament, Father Schaffranek championed the well-known resolution of the Frankfurt Parliament of March 31, 1848, that all peoples within the German Confederacy should have liberty of language in school, church, court and administration. The Prussian Government, in consequence of these views, had gone so far already as to

sanction (1) the use of the Polish language in the schools equally with the German (2) the abrogation of any discriminatory laws or usages that made ignorance of the German language a handicap in the acquisition of any trade, occupation or apprenticeship (3) the use of the Polish language in official communications (4) the use of the Polish language only in purely Polish places for religious instruction and elementary teaching; the use of German to be prescribed only in the upper school forms (5) Poles to have equal rights before the law in matters in litigation (6) the appointment of officials employing both languages in those districts where the mixed language was employed (7) the introduction of Polish instruction in the colleges and seminaries and in the University of Breslau (8) the printing of the Parliamentary debates in the Polish language and their distribution at Government expense in districts where both languages were spoken.

The following educational regulations are of interest as exhibiting the constant interest of the Prussian Government in the matter of dealing fairly with the educational requirements of the Polish minority. In 1842 lectureships for the Slavic languages were founded at the Universities of Berlin and of Breslau which are still in existence. In the same year, the Government introduced Polish instruction in the colleges of Oppeln and Gleiwitz, in 1843 at Neisse, in 1856 in Leobschütz and Ratibor and in 1858 in

Glogau in Lower Silesia. Polish was ordered to be taught as a compulsory subject in the Glogau teachers' seminary and Polish applicants were given precedence over German. Here likewise, in 1862, the school in the seminary for the practise of German was converted into a school for the practise of Polish. In 1849 was founded a teachers' seminary at Peiskretscham and in 1867 one at Pilchowitz, requiring the compulsory teaching of Polish. In 1851 a Polish Protestant teachers' seminary was started at Konstadt and in 1858 one at Kreuzburg. After 1848 the Polish language was employed in all Upper Silesian elementary schools. In 1863 the local Government authorities in the Oppeln District which embraces Upper Silesia, ordered that "religious instruction in the schools where Polish pupils preponderate is to be given exclusively in the Polish language; for only the mother-tongue can be an adequate means for the deep edification of the inner life." And further, "Singing is an action of heart and feeling; therefore hymns and folksongs must be given to the children in the mother-tongue."

The condition of things in Upper Silesia down to the time of the inauguration of the Ultramontane (anti-Catholic) struggles by Bismarck in the seventies may be best described by two citations from Polish authorities. In 1869 the Polish author Malinowski wrote as follows:—The conviction of the ineffectiveness and immorality of ousting the Polish language

as medium of instruction from the Upper Silesian schools, took hold at the beginning of the century and dominated public opinion everywhere." Malinowski then quotes the following Polish expression of opinion from the periodical *Zentralblatt für Schlesien* (1869):—"Our Silesian Poles are Prussians, and loyal Prussians, therefore they shall and will learn German, too. But that this aim shall not be attained in the way of violent Germanization of the Polish schools is, we are thankful to say, the deep conviction of our educational authorities, as also of all earnest and Christian-thinking people in this country."

During the Ultramontane struggle, Polish instruction in the lower school forms was still left untouched. This fact deprived the movement of much of its attributed character of ruthlessness with respect to the idea of a thorough Germanization of the mixed population. Moreover, the social benefits which were increasingly extended by the wise and far-reaching laws of social reform applicable to the laboring classes, did much to alleviate any feeling of hostility towards the Prussian State which the new policy of education might have given rise to. Furthermore, there could be no sense of great oppression in a State where the rights of the meanest subject, be he Pole or German, were upheld with the strictest impartiality by the courts. Indeed, as regards the administration of justice, the bitterest

opponents of the new Bismarckian policies had nothing but praise to offer.

Accordingly, even the Germanizing tendencies of the Bismarckian régime failed in Upper Silesia to arouse any wide-spread anti-Prussian and pro-Polish nationalistic sentiment. It was, indeed, felt that these repressive tactics would turn out to be of a purely temporary character and that the time would come when their futility would be recognized and a return be made to more reasonable measures.

CHAPTER ELEVEN

THE POLITICAL UNITY OF SILESIA

X. Rise of the Separatist Movement and its Decline

Up to the close of the war, no acute manifestation of separatist feeling was anywhere observable in Upper Silesia. The bravery and perfect loyalty of the Upper Silesian troops were, on the contrary, remarkably conspicuous. Politically, the Polish elements in Upper Silesia in the three or four decades prior to the outbreak of the war scarcely played any part. Indeed, up to 1903, no Polish deputy was sent from Upper Silesia to the Reichstag. When the war broke out, out of the twelve representatives of Upper Silesia in the Reichstag, three were Poles. The intellectuals of the whole district, the commercial classes, the leading men in arts, science and agriculture, the creators of Upper Silesia's industry, the leaders of the working men and the trade unionists, were almost without exception German.

Things seemed, however, to take a new turn, with the military and political break down of Germany. An extraordinary Polish agitation set in.

New prospects were opened to a population tremendously exhausted with work, half starved from want of food, disillusioned and irritated by the severely repressive military measures during the last period of the war, the effect of which was to deprive the people of many of their most cherished privileges and liberties.

Other countries, indeed, even those of the victors, have had a taste of what militarism means and can, therefore, readily understand the feelings that now possessed the Upper Silesians. The unrest and discontent grew when it was perceived that the close of hostilities brought no relief in the situation. The continuance of the blockade, after the armistice, intensified the misery of the people, and gave rise to bitter and desperate feelings that bordered on despair. To a sick, hungry, and morally despondent people, any measures, be they of the wildest nature, will appeal as a possible means of ascape from unen durable conditions.

In such an atmosphere, the stirring-up of race hatred became an easy matter. To this were added questions of a capitalistic and even communistic nature which now began to rise to the surface. The consequences that were to follow from the German Revolution, the new demands of the working classes, the sympathies and antipathies that were to be aroused by the threatened spread of Bolshevism, the many questions of international import which

were daily being discussed in the press, with their possible effect upon the future of Germany—all of these circumstances played their part, during this time of "storm and stress", to stir the feelings of the people to their lowest depths and to cause them to accept whatever new doctrine was preached or offered, as a possible palliative for the existing misery.

Moreover, the folly of the Government in permitting one of its Ministers, the "Independent" Adolf Hoffmann, to attempt to carry out, at such a time as this, an attack on the confessional schools, provoked the indignation of Catholics throughout the country, and in Upper Silesia, where the forces of Catholicism are particularly strong, his action alienated a large section of the Catholic population who felt that if the new Revolutionary Germany was to support an anti-Catholic crusade, it was a blow aimed at the liberties of the Upper Silesians, and in that case they would feel at liberty to seek a new orientation.

Accordingly, there arose in Upper Silesia, as in other parts of Germany, a separatist stream, the watchword of whose followers was "cut loose from Berlin" ("Los von Berlin"). This demand for separation expressed itself in various forms. There was discussed the possibility of an independent province, an autonomous province or State as part of a federal system, a free and independent sovereign State of Upper Silesia, an independent Upper Silesia under

the protectorate either of Poland or of Germany, and finally an independent Upper Silesia under the protection of the League of Nations.

This agitation, moreover, was not without its influence upon the great industrial magnates. They perceived everywhere in the industrial regions of Germany the emergence of almost chaotic conditions. Spartacist and communistic outbreaks were the order of the day at Berlin, in the Saar District, in the Ruhr District, in Saxony, in Bavaria and in Upper Silesia itself. The question was where to turn in order to be assured of the return of stability, the restoration of orderly conditions and a situation which would revive hope in the working classes and encourage them to renew their much neglected labors.

With such confusion existing both in the public and the private mind, it is not to be wondered at that Polish propagandists at this time were enabled to exert a considerable influence upon public sentiment. And, in truth, the Polish movement believed its day had dawned, and at the elections for the National Assembly in January 1919, its leaders proposed to show the world that Upper Silesia had become a Polish province by solemnly proclaiming *abstention from voting*.

In the meantime, however, a strong reaction had set in, due almost entirely to the incredibly stupid and arrogant tactics of the Poles themselves. They

began to make themselves thoroughly at home in Upper Silesia as if the Province were already theirs. They went about loudly proclaiming that Upper Silesia would be theirs, with or without a plebescite, regardless of the wishes or sentiments of the people, and if necessary, they asserted, Upper Silesia would be made to yield to force, since, whatever measures would have to be taken to attain their object, the Poles had been assured of certain Allied support and assistance. Numerous street provocations incited by over-enthusiastic Polish nationalists provoked occasional tumults. Incitements intended to call forth the aroused indignation of the German element were of frequent occurrence. Then came the announcement that the Government had returned to its senses and had caused the resignation of Minister Hoffmann and the shelving of his anti-clerical measures, and that concessions had been made to the separatist idea, consisting of an assurance of complete autonomy for Upper Silesia, as a federated State within the federated commonwealth of Germany—when these facts became known in December 1918, agitation for separation and support of Polish nationalistic aims may be said to have received its death blow, so far, at least, as the Upper Silesians themselves were concerned. The crisis was over, for the sympathies of the people had returned to their former channels.

Accordingly, when the results of the January

polling became known, it was found that the measure advocated by the Polish nation, namely, abstention from voting, had turned out a complete fiasco. For, in spite of much terrorism, 70 per cent of the voters went to the polls and cast their votes, signifying thereby that they were German and wished to remain German. In a way, the result of this election was as complete a disillusionment for the Poles and for such of the Allied Powers as had been mislead by Polish propaganda, as were the recent elections in East and West Prussia which voted solidly German by over 95 per cent.

Some months later the first version of the Paris Treaty announced the cession of Upper Silesia to Poland. A storm of indignation was the answer, strong enough to cause the Paris Conference to alter its decision. Agitation and incitement to agitation, however, continued uninterruptedly and the Poles perceiving that all was not going quite according to programme, struck out a new path with the application of methods which had already proven efficacious in Posen, namely, seizure of the coveted territory by armed force and the creation thereby of the *fait accompli*. The great riot of August 1919 was to lead to the desired aim. But once again their plans miscarried, in spite of assistance from Poland; and the attempt to turn the tables on the German Government by accusing it of wilfully causing the whole broil, proved a boomerang, for,

an Allied Commission, appointed to inquire into the facts, entirely absolved the German Government from any blame in the matter.

But it was not alone the abstention from voting fiasco which had encouraged the Germans and pro-German elements in Upper Silesia to assert themselves in a demand for fair-play and justice. There were other straws which showed which way the wind was blowing. For example, the strike of the school children.

At the time when General Haller's Polish troops were being transported into Poland through German territory, the Polish nationalists saw in this achievement so decisive an indication of Poland's newly-won place in the European concert, that they let themselves go in a manner which exhibited the top peak of arrogance. And, accordingly, among other measures devised to show the world how things stood now in Polish circles, the leading agitators demanded that the school children should "go on strike", that is to say, they were to absent themselves from school and demand from the authorities that thereafter instruction be given in the Polish language. Upon the concession of this demand they were to go back to their school duties.

The authorities, hereupon, instituted an inquiry among the parents of these school children and the startling discovery was made that only a very small percentage demanded instruction in the Polish lan-

guage. In Königshütte, the largest industrial city in Upper Silesia, with a population of 75,000, there were but eighty requests for Polish instruction in the local schools, although Königshütte is one of the largest centres of the Polish element and of Polish nationalistic agitation in all Upper Silesia.

It was through such enlightening demonstrations as these that it gradually dawned upon both the authorities and the populace that the entire agitation and incitement were wholly artificial in origin and character and rested upon no sound foundations. It was all simply noise and frothings. The hard-headed, good-humored, industrious "Water-Pole" of Upper Silesia was not to be so easily ensnared, by fair promises and specious arguments, to give up his splendid advantages in the Fatherland for the doubtful privilege of citizenship in a new State whose first consideration for his welfare would probably be to make a soldier of him. For it had now become known that, despite assurances given to exempt them from military service for a period of years, the Polish State had forced into its army, all the able-bodied men in the German districts which had recently been annexed (i. e. Posen etc.), and had compelled former German subjects to serve, against their will, in the Polish armies now engaged in a series of campaigns against a ring of enemies. Such a prospect was surely not an encouraging outlook to men, like the Upper Silesians, who had become

fairly nauseated with over five years of war and deprivation, and with militarism generally, and who now saw themselves secure from all further exertion and sacrifice in this direction in the new German Fatherland. To exchange so fair a prospect for the joys of campaigning with Pilsudski against the Bolsheviki was not what the "Water-Pole" was picturing to himself as the new millenium.

Moreover, he was beginning to learn the real facts about the prospects of life, liberty and the pursuit of happiness in the new Polish Garden of Eden. Refugees, deserters and soldiers on leave were coming back from the Beresina front, some of them "Water-Poles", ex-German soldiers who had been taken prisoner by the French on the Western front and afterwards forcibly conscripted into Haller's army.

These witnesses at first hand, of what was going on in Poland, disclosed such an entirely different account of things from that which had been industriously circulated throughout Upper Silesia by the well-paid Polish agitators that, if anything more were needed to completely disgust the "Water-Pole" with the new Polish nationalistic movement, he had it now in full measure and brimming over.

CHAPTER TWELVE

THE ECONOMIC UNITY OF SILESIA

I. The Mining, Textile, Agricultural and Other Industries of Upper Silesia

The character of Silesia as a transit country for the commerce of East and West has been a notable fact from the earliest times of which there is historic record. Even before the colonization of Silesia by the Germans, there was such a transit trade which was, of course, immensely increased by the German colonists, when they came, for it was they who provided a class especially trained and adapted to the carrying on of trade and industry—the middle-class of free citizens. Such a class had no existence among the Slavs, for in the Slav countries trade and industry were carried on almost entirely by foreigners under whom they reckoned also the Jews.

With the settlement of Silesia by the Germans there sprang up a brisk and lucrative trade and transit commerce between the Eastern Slavic countries, on the one hand, and the Teutonic and Latin countries, on the other, and this trade grew to immense proportions in the Middle Ages. Thus

were definitely established the permanent foundations for the future economic prosperity of Silesia.

The towns of Silesia now became the fixed centres and firm supports of this transit trade—at the head of them, the city of Breslau which, in the later Middle Ages, was the centre of a commercial system extending from Bruges to Kiev and from Dantzig to Venice.

Silesia received industrial products from western Germany and sent them to Poland and Russia and from there to the East. It procured raw materials from the East and passed them on to the West—metals, skins, hides, tallow, wax (for religious services and rites). Herds of cattle were imported by Silesian cattle dealers from Poland, South Russia and the Rumania of today, for the provisioning of the people in Central and Western Germany.

Having successfully established a lucrative transit trade, the traders of Silesia now turned their efforts to the production in their own country, for export, of the very same goods which they had formerly imported from abroad. They likewise took steps to provide for the production of their own raw materials. This was greatly favored by the fact that there was to be found, in the land itself, a remarkable variety of natural resources. Silesia possessed a wonderful supply of coal, iron ore, zinc, lead and other valuable minerals, an almost inexhaustible store of wood in its forests, and a fertile

soil which produced a remarkable abundance of agricultural products.

The exchange of merchandise with Silesia now became, for the other parts of Germany, a matter of all the greater importance, the more it proved itself in a position to act not only as a commercial agent of the East but also as a supplier of its own important raw materials, manufactured goods and agricultural products. And, to-day, the international trade of Breslau, although no longer to be compared with that of Mediaeval times, is still very large. It exports chiefly produce from the field and forest, namely, flax, corn and other fodder, wood, hides and skins. Some of these products come from East Germany, the rest from foreign lands. Moreover, Upper Silesia's import and export trade is chiefly done in Breslau, whose prosperity is thus prineipally based on its connection with the mines and foundries.

Germany's most important industry of to-day—mining—which was introduced and greatly improved by the Germans of Silesia, had already attained some importance in the Middle Ages. Its centre was, at first, Central and Lower Silesia, where today only the names of certain towns—Goldberg, Silberberg, Kupferberg—remain to remind us of what those appellations originally stood for.

In the Tarnowitz neighborhood, the silver and lead mines attained a short period of prosperity during the sixteenth century, after which they were neglected,

thereby suffering the same fate as the other hidden treasures of Upper Silesia which were almost entirely neglected until the second half of the eighteenth century when Upper Silesia became a part of Prussia through separation from Austria in the Silesian wars of Frederick the Great.

From this time forward, Silesia's coal and other stores of valuable mineral ores were esteemed at their full value and produced a complete change in the economics of this German province. Indeed, without in the least undervaluing the advanced state of the agricultural and other important industries of Silesia, an examination of the facts compels us to recognize that the Silesian mining districts, the Upper Silesian coal basin and ore deposits, have become the basis, the supporting pillars of the whole of Silesia's economics.

There are few places in the world where we find so many of the earth's treasures in one and the same spot and where at the same time the strata are so easily worked as in Upper Silesia. Its coal-beds are among the largest in the world. At the present time its coal production amounts to a fourth of the production of Germany. It is two and a half times as large as the former production of Austria-Hungary and double that of Russia and Belgium. With the exception of England, America and the Rhenish-Westphalian coal district, it is equalled only by France. And it is able to yield a

much larger quantity still, for the store of coal in Upper Silesia is greater than in the Rhenish-Westphalian coal district. In all probability it can not, at the present rate of consumption, be exhausted under one thousand years.

The facilities for working the Upper Silesian mines are great in every way, and so far as machinery, buildings and other architectural outlay are concerned, they are modern, provided with splendid technical and scientific equipment, and unusually extensive. The quality of the coal is equally good for industrial and household purposes. It is less fit for the production of coke except in the Hindenburg (Zabrze) and Waldenburg districts and likewise in a part of the Rybnik district where the coals are especially suitable for the purpose. The coal has its natural market in the provinces of East Germany, including Berlin, but it also finds its way to Saxony and South Germany.

Upper Silesia's zinc production is the largest in Europe; the quantity produced amounts to 17.5 per cent of what is brought forth in the whole world and is 63 per cent of Germany's entire output. The production and manufacture of iron and lead are also very advanced. Its lime layers are inexhaustible, and since concrete and reinforced concrete have been more extensively employed for building purposes, the Silesian lime and cement have become indispensable to Eastern Germany. As regards iron,

to keep up its position in the export trade, it must make up for quantity by the best possible quality and by an astonishing variety of articles manufactured—from stiff armor-plate to elastic-springs, from immense iron-masts to the minutest parts of machinery. Without, at this time, giving any detailed figures with respect to Upper Silesia's industries and the volume of their output, suffice it to say that the total gross value of the production of the Upper Silesian mines and foundries was in 1913 estimated at 938,000,000 marks and the capital invested at two billions of marks.

Of the second branch of industry characteristic of Silesia, the textile industry, cloth-making was the first in achieving a successful development, encouraged by the example of Western Germany and the Netherlands. This trade induced the owners of agricultural holdings to pay more attention to sheep-rearing. The result was that the production of wool reached so high a standard between the seventeenth and the nineteenth centuries that merchants were attracted even from England to the Breslau wool market.

This trade, however, once so flourishing has been partly ruined during the last 50 years by the trans-oceanic competition and the more intensive cultivation of the soil. Moreover, cloth-making was later on eclipsed by the linen industry which in the eighteenth century, under Frederick the Great, sent its products even as far as America, and established a world-

fame for itself. This industry together with the Silesian fabrication of cotton, introduced at a later period, is still famous both at home and abroad. Furthermore, the prosperity of agricultural holders was greatly promoted by the linen industry through the encouragement it gave for the profitable cultivation of flax and of all kinds of plants containing dyeing-matter. The abundance of firewood and the spacious meadows in the mountain districts, requisite for bleaching, were also favorable to the industry.

It is particularly in the manufacture of clothing that the textile industry continues to remain an important factor in the Silesian economy. In Breslau alone, the clothing and underwear workshops employ 25,000 hands, and in addition to the manufacture of linens, cottons, woolen goods, clothing and underwear, there is likewise a considerable industry in the manufacture of straw and felt hats. Among the minor articles of export of Silesian manufacture may be mentioned tin-foil, brushes, cigarettes, chocolate, tinned goods and pictorial prints.

In Upper Silesia, farming has been greatly restricted by the raw climate and the unfruitful soil. Over vast expanses of ground, the forest appears to be the only possible form of cultivation. Taking the whole province of Silesia into consideration, however, we find that all Silesia (Upper, Central and Lower) produces rye and oats, and sometimes even wheat, beyond what is necessary to supply its own needs

and that it has the largest potato crop of all the Prussian provinces, and, accordingly, in all the crops just mentioned, there remains in normal circumstances a considerable overplus for export to other parts of Germany. Furthermore, Silesia supplies the industrial district with sugar, and is extending its efforts, by greater attention paid to live-stock culture and to the dairy, to the providing of Upper Silesia with its milk and meat.

Notwithstanding all drawbacks, the Upper Silesians have succeeded in developing the agricultural and forestal possibilities of their land to a very high degree. Approximately 1,800,000 acres of Upper Silesia's soil are devoted to farming, 30,000 acres to gardening purposes, 740,000 acres to meadow and pasture lands, and 950,000 acres to forests*. In 1918, there were produced in Upper Silesia, 87,075 tons of wheat, 241,757 tons of rye, 71,194 tons of barley, 159,479 tons of oats, 977,540 tons of potatoes, 356,375 tons of sugar beets, 161,781 tons of clover, 3,980 tons of Luzerne, 235,850 tons of hay. As regards live-stock, there were 106,541 horses, 367,545 head of cattle, 18,692 sheep, 276,218 pigs, 169,393 goats, 185,079 rabbits, 1,502,913 head of poultry.

In spite, however, of what appears to be a reason-

* Of the total land area devoted to the purposes mentioned in this paragraph, 71 per cent is owned and worked by Germans as against 29 per cent by non-Germans.

ably prosperous state of her agriculture, there was imported and conveyed by rail into Upper Silesia from farms in Central and Lower Silesia and from neighboring places in Germany, food for men and animals, at a cost, in 1911, of 156 millions of marks. And this figure represents about the normal import requirements of Upper Silesia.

Upper Silesia, like all of Germany, is by nature a land of forests, and in spite of the inroads made upon them by the earlier colonists and by the demands of industry, there still remains 26 per cent of the Upper Silesian land devoted exclusively to forests—approximately 4000 square kilometres. The foliated trees are to be found, for the most part, in the more fertile lands west of the Oder, whereas the coniferous species are more common in the elevated Falkenberg region and in the country east of the Oder. In the early days of Upper Silesia's colonization, this timber had little value except as firewood and for building purposes, the supply, for those times, being so great as to make wood practically equivalent to a waste product. This fact made it possible for Frederick the Great to establish an iron industry, employing the little valued forest trees as fuel for his furnaces.

At the present day, these forests are carefully looked after and attention paid to adequate reforestation, for the timber has now a high value, particularly for use in the mines as pit-props, and in the

manufacture of cellulose and paper, an industry that has grown to great proportions in Upper Silesia, requiring, indeed, considerable importations (one million cubic metres per year) from Russia and Galicia in order to meet the demands of manufacture. The wood required for use in the mines alone, greatly exceeds the available supply of suitable material in the forests of Silesia at the present time.

CHAPTER THIRTEEN

THE ECONOMIC UNITY OF SILESIA

II. Commercial and Industrial Interdependence of Upper Silesia and Other Parts of Germany

We now come to discuss the question of the interdependence between Upper Silesia and the other parts of Silesia and between Silesia and the rest of Germany which the peculiar situation of the Silesian country and the local conditions in Upper Silesia and in Silesia generally have established.

To begin with, as regards the Upper Silesian mining districts, the chief obstacles to their development, otherwise so highly favored by nature, are their inland situation, their great distance from the sea and the consequent high rate of freight for transporting their products. To make good this difficulty is the peculiar task of the Oder which thus most perfectly fulfils its mission as a living force, a connecting link for Silesia. On the whole, development of inland navigation in Germany has been slow, and accordingly this mission of the Oder was not fully appreciated until modern times. But when full realization came of the part to be played by the

Oder in the matter of inland transportation, practical steps were at once taken to utilize the advantage to the fullest extent. At the present time, the cutting of canals, continued even during the war, has gone far towards meeting the requirements of the Silesians as regards the use of the Oder. Cosel, the most important harbor in Upper Silesia, ranks as sixth in importance among the inlands ports of Germany. Oppeln Harbor, completed just before the war, also enjoys a considerable trade. The district of Waldenburg has for some time been connected with the Oder by Maltsch Harbor. In the down stream traffic, the chief articles of trade are coal, zinc, iron, and steel. The returning freight consists of phosphates and ores imported by the Upper Silesian iron-works from other parts of Germany and from abroad.

Indeed, the Upper Silesian industrial district is a centre in which are absorbed the products not only of the somewhat limited agricultural output of Upper Silesia itself, but likewise of the more extensive production of a broad zone which covers a large part of eastern and southeastern Germany. The principal article of exchange is, of course, coal. But as the extent of coal production in Upper Silesia, both actual and potential, far exceeds the requirements of the neighboring districts from which it secures its exchange products, it is necessary for the Upper Silesian industry to widen its field for

the exchange of commodities and to secure favorable terms for the sale of its products even in the more distant markets of Germany.

Furthermore, if we take into consideration the fact that Upper Silesian industry is largely dependent, even at this stage of its growth, on foreign countries for its raw materials, then it becomes apparent that its future evolution is not entirely exempt from restrictive factors which may hamper its free development. For, already in 1899, there was more foreign than native iron ore employed in the Upper Silesian iron industry. And now with the loss of Lorraine, the iron situation for Silesia and for all Germany becomes still more serious. For we find that the province of Lorraine, when a part of Germany, furnished 29,000,000 of the 36,000,000 tons of iron ore produced in that country. And yet, notwithstanding the enormous iron production of Lorraine, Germany had still to import, before the war, 14,000,000 tons of iron ore each year. Before 1913 France stood third in furnishing this mineral to Germany. That year, France passed Spain and stood second, exporting to Germany 3,811,000 tons from the Briey basin, only 700,000 tons less than Germany imported from Sweden that year. In July 1914 Germany produced 1,561,000 tons of cast iron. Before the war, Germany had to import 44 per cent of her iron ore from Sweden, France, Spain, South Russia, and the Steiermark district of Austria.

It has been found, moreover, that the native iron ores have to be mixed, in the smelting, with the foreign ores in order to secure a good product favorable to the purposes for which the iron is subsequently to be used.

From these facts it must, accordingly, be evident that the Upper Silesian iron industry must continue to labor under a handicap, in view of the condition of its own iron stores * and the difficulty of securing an adequate supply from abroad, and that these conditions indicate the necessity for broad markets and good facilities for the exchange of products.

That Upper Silesia requires a very broad market for its products must be clear, furthermore, when we consider that it is second only to the Rhenish-Westphalian (Ruhr) district in the production of coal, and that it produces 63 per cent of the German and 17 per cent of the world requirements of zinc and 10 per cent of the German requirements of lead.

Such a broad market has, however, been secured to Upper Silesia's industry in the close and firmly attached bonds that hold it to Germany. Not only its geographical situation, its natural, political and econimic unity with Germany attach it to the Fatherland, but likewise the unifying influence of a system of railways which bind it to every part of the realm.

* The total remaining available reserves of iron ore in Upper Silesia are estimated at 16,000,000 tons, whereas the reserves of iron ore in Poland amount to over 600,000,000 tons.

The part played by these railroads in the rapid development of Upper Silesian industry, was perceived soon after the construction of the first railroad from Upper Silesia to Berlin in 1846. From that time on, the growth of industry and population in Upper Silesia became absolutely unprecedented.

Indeed, for Upper Silesia, there could be no other possible orientation of its life and industry than this close relationship with Germany, since the neighboring States—Poland, Russia, Bohemia—were not only themselves actual competitors in the production of both coal and iron, but they were also not in a position to absorb the greater output of the Upper Silesian industry as Germany was able to do.

Although, as has already been pointed out, the unfavorable inland situation of the Silesian mining districts is greatly compensated for by the Oder, it is an additional requirement of their economic position that there exist active markets in the vicinity, where traders, both buyers and sellers, may meet for the interchange of goods, in the exchange of which all have a common interest in view of their mutual dependence on one another. And, in reality, we find that these necessary requirements for Upper Silesia's prosperity have been supplied by reason of the gifts of nature, on the one hand, and the industry of the people, on the other hand. The mines and foundries are closely connected with other industrial undertakings and with agriculture as pur-

veyors and consumers. This connection has become indispensable for the mining industry. But the entire prosperity of other industrial enterprises in Silesia, their competition in the markets of the world, depends on a cheap and convenient supply of coal, iron and other products of the mines.

This inter-relationship and inter-dependence of industry and trade, are illustrated by many examples. In the cellulose and paper industry, which has attained great proportions in Germany, we find an absolute dependence upon the products of the Upper Silesian industrial district. Likewise in the chemical industry, with its various fabrications of international importance, and in the very extensive enterprises that have been established for the manufacture of machines, machinery and all kinds of mechanical apparatus. This latter industry, moreover, greatly promotes and invigorates other branches of industry as well as agriculture. To illustrate its expansion, it is sufficient to cite the fact that, in 1913, the Silesian machine industry supplied machines, in the province itself, to the value of fifty-eight millions of marks and in other parts of Germany to the value of seventy-two millions of marks. Among its productions may be named paper and agricultural machines, notably steam ploughs, refrigerators, measuring apparatus, gasometers, hydrometers, scales, clocks, dredges, railway carriages and boats. Anothers striking example of the inter-relationship that exists between

the various industries is furnished by the production of electricity which is so important for industry as a whole, and is dependent chiefly on coal for its very existence. The part played by water-power in the generation of electricity is still, relatively speaking, small.

Besides machines and electricity, Upper Silesia furnishes the Silesian farmer with coal for threshing and steam-ploughing, for the preparation of fodder and for various other agricultural activities, above all for the important manufacture of sugar and starch, and for the distilleries and dairies.

Modern agriculture, which aims at producing larger crops by intensive methods of cultivation, requires artificial fertilizers and these Upper Silesia supplies in the form of slag, a by-product gained in the production of iron and steel. Upper Silesia likewise provides the farmer, for similar uses, with certain lime fertilizers and with superphosphate made from sulphuric acid of which the country is a great producer.

As has already been pointed out, Upper Silesia not only supplies the Silesian farmer with so many of his needs, but it depends on him for its great industrial population. And accordingly, as we have seen, the amount of food conveyed to Upper Silesia from other parts of Germany reaches huge proportions.

Upper Silesia is not only an important purchaser of Silesian agricultural products, but it also obtains from other parts of Silesia raw materials and industrial

products which it does not possess itself. It receives mine engines for its shafts, loadstones for its iron works, fire-proof clay, fire-proof stones, slate-clay for its zinc works, Waldenburg coke for its lead works, artificial tiles and brick for building, electro-plated ware, and finally machine parts for the repair and renewal of all kinds of machinery and apparatus used in the powerhouses, generator and transforming plants, foundries, smelting furnaces, mine-shafts and collieries, machine-shops, coke-ovens, by-products works, laboratories, experimental stations, engine-houses, car-houses, water and rail transport. Practically all of the machinery, machines and apparatus used in Upper Silesia have been manufactured in other parts of Germany or in other parts of Silesia. This fact alone and standing by itself strikingly illustrates the dependence of Upper Silesia on the rest of Germany. Nor does it require much imagination to apprehend what might happen to the great industry of Upper Silesia if it were separated from a hostile or even unsympathetic Germany where all of its machines were built and whence all its repair parts must be obtained.

In these activities of trade and industrial exchange, the city of Breslau plays a principal role, and it is here that arises the scientific influence exercised throughout this region by the higher institutions of learning such as the University of Breslau and the Technical High School. Thus, while, on the one

hand, it is true that the economical prosperity of Silesia is a work of German capital, it is, on the other hand, also a product of German technical science. In Silesia, the German genius and spirit of enterprise first achieved a series of fundamental industrial discoveries and inventions that were of vast importance to industry. At Kunern, near Wohlau, the first German beet-root sugar factory was established. At about the same time, pure zinc was for the first time distilled in a zinc foundry in Upper Silesia. In 1840 a Waldenburg manufacturer of porcelain for the first time employed coal instead of wood for the production of real china. The process of making coke in the Waldenburg district led to the construction of the first furnaces suitable for producing the valuable by-products, tar and ammonia. The founder of the Siegersdorf clay-works brought artificial tiles to perfection by the invention of a special kind of kilns, the so-called "ring-ovens." And, finally, in the domain of health and healing, German medical science aided by the technical skill and research of German laboratories has combatted with success certain illnesses which at one time seemed unavoidably connected with certain foundry work.

Before the advent of the railroad, the Silesians tried to make increasing use of the rivers instead of sending their goods by land, which was expensive and often unsafe. The mouth of the Oder, closed

through the economical policy of Sweden and leading only to an inland sea—the Baltic—they laid out a route from the Oder through the Frederick William canal to the Elbe, then on to Hamburg and the North Sea. At that time, the Silesians had to use the Elbe instead of the lower course of their own river. Nowadays, the Oder is to some extent a compensation to the inhabitants living on the banks of the Elbe for the fact that the upper course of that river lies in another political and economic State unit. As has already been pointed out, it was the connection of the Oder with the Elbe navigation which did so much to weaken the economic relations of Silesia to the other parts of the Habsburg realm, prior to 1742, and made certain its future history as a part of the Prussian State.

Towards the middle of the nineteenth century the economic relations of Silesia with other parts of Germany became greatly strengthened by the building of railways and by the Customs Tariff Union (Zollverein) which created a firmly bound and united German economic State unit. The disadvantage of Silesia being situated so far from the sea and being backward with regard to water-routes was now greatly counterbalanced by the fact that the railways provided a better connection with distant trading centres and markets. And in more recent times, this expansion in the railway service was likewise extended in the direction of Poland and Russia.

Thus the construction of railways was not only an immense help to the various Silesian mining districts, but it made the factory chimneys spring up in other parts of Silesia in a manner that suggested a work of magic. In a general way, however, the orderly and progessive development of the country, traversed by the railroads, proceeded along the same paths, albeit at an accelerated rate, as had hitherto been followed for centuries, for it was not chance that caused the railway lines to the West to be laid out along the same routes that had once been adopted by German immigration to Upper Silesia. Natural conditions had dictated these routes as positively as a law of nature.

Because of the great economic progress of the last decades, the economic unity of Silesia, as well as its connection with the other parts of Germany, have become still more firmly fixed. For, the mining districts together with the other parts of Silesia are now becoming, more and more, the indespensable purveyors and consumers for a great part of Germany. The industry of the whole of East Germany as well as the prosperity of agriculture east of the Elbe are based upon it. Silesia, as inland country, with its considerable exports, except for what is sent to Russia and Austria in spite of closed frontiers, is entirely dependent on her commerce, exchange of products and traffic with the other parts of Germany. Indeed, that each particular branch of industry

in Silesia, so various in its requirements, is dependent on this union with Germany—so much we believe has been demonstrated in our brief outline of conditions. But it is likewise true that the economic life of Silesia as a whole, will stand or fall with that of Germany. It is only from permanent union with Germany, in the future as in the past, that Silesia can hope to make up for the disadvantages of its inland situation. For, without such union, there can never be carried out the perfecting of the water-routes and land-routes, and the regulation of railway freight charges, so indespensable to Silesia's success if she is to be able to compete in the markets of the world and thus save her industry and commerce from the absolute ruin that would result in the event of a different orientation in her future political status. Moreover, the absolutely essential influx of capital*, which Silesia today lacks, can only come from Germany, since Silesian trade and industry have been based, for two centuries,

* That German capital and German business enterprise are the preponderating factors in Upper Silesia is shown by a comparison of the taxes paid by the Germans and the non-Germans. An examination of the figures in the twenty most important cities of Upper Silesia shows that Germans paid 80 per cent of the real property taxes, and 91 per cent of the income taxes levied in those cities. Business concerns in these same places are divided for purposes of taxation into four classes. In Class I, 450 concerns were owned by Germans, 3 by non-Germans; Class II, 479 by Germans, 1 by non-German; Class III, 3821 by Germans, 114 by non-Germans; Class IV, 11858 by Germans, 929 by non-Germans.

upon the co-operation, enterprise, commercial, industrial and technical aid of the Germans.

The fate of Silesian trade and industry has been so inextricably bound up with the other parts of the realm that amputation of a part would unquestionably so affect the whole as to strike at the very life and vitality of the nation. For, from whatever point of view we look at Silesia's past and present economic existence, we find the different branches of industry to consist of a multitude of intertwined links, which, however, all lead back to the Upper Silesian industrial districts that constitute by this fact a unifying force in the midst of the most diverse elements.

Out of the natural, political and economic unity of the land has been created a perfect solidarity in its industry, and to cut away any part of the structure, would be to demolish the whole and to destroy the upbuilding work of civilization that has been created by the devoted energies of many generations of men.

CHAPTER FOURTEEN

DANGERS FROM THE EAST

Examined from a western point of view, what above all ought to cause the western Powers to keep Upper Silesia from passing to Poland, are the mischievous influences of the East, for which Poland, as formerly in the Middle Ages, is an easily crossed passage-way.

The separation of Upper Silesia from Germany and its attachment to Poland would bring a highly cultured, conservative thinking people into close relationship with the new revolutionary and subverting doctrines of Eastern Europe and Asia. Its modern and scientifically developed industry, with all the uplifting and highly beneficial social institutions established for its workers, would become a prey to infection from the social and economic diseases of Poland and Russia. The unemployed of Poland alone, estimated at one million, would overrun and desolate the country like the proverbial plague of locusts, bringing with them the lower standards, the degrading vices, the drunkenness, the wide-spread prostitution and general degeneracy which characterize

the thriftless and in part blamelessly unfortunate lower classes of Poland.

One has only to travel through regions inhabited by Poles, like Galicia and Congress Poland, where whole villages are pauperized through lack of thrift, backward conditions and alcoholism, to realize what it would mean for Upper Silesia—with its magnificent school system, its highly developed religious life, its clean and orderly villages, towns and cities, its high standards of living, its contentment and general welfare—to be joined to and administered by a State which for ages has been a prey to such conditions as we have pictured.

If, as we have pointed out, the Upper Silesian people would in this way be demoralized and impoverished by the low standards of the pauperized and illiterate Polish proletariat, there is an additional and very weighty reason for avoiding the pauperization which a union with Poland would engender, namely, the loss to the workers of Upper Silesia of all social benefits which they are now entitled to receive under the law, by way of old age pensions, sick-relief, compensation for industrial accidents and for incapacity due to injury and illness.

The Upper Silesian mines, alone, paid (from 1900 to 1912) to their laborers nearly one hundred and eighty millions of marks (£ 9,000,000) by way of such compensation and relief, and in the single year 1912 the sum of twenty-one millions of marks

(£ 1,050,000) for the same ends, that is to say 16.5 per cent of the total wages paid. These figures are parallelled in no other country.

Moreover, the Voluntary Commission of the Upper Silesian mining industry for the housing of the workers pay out fifteen and a half millions of marks (£ 775,000), yearly average, for housing purposes—surely a remarkable contribution to the welfare of the workers. More than a third of the married mine-workers live in the colonies provided for them, a description of which has been given in a previous chapter. More of there colonies are now in course of construction and it is the ultimate purpose of the mine-operators to provide similar housing facilities for as many of their employees as may be desirous of using them. In addition to all this, the mining industry has subscribed millions of marks in voluntary contributions to sanatoria, churches, schools, and convalescent homes for the benefit of the workers.

For the purposes of common school education there are today in Upper Silesia 1570 schools with 7433 teachers. Many of these schools are undenominational, others are Protestant schools, Catholic schools and Jewish schools. For the purposes of *higher* education, Upper Silesia has a great variety of colleges, technical schools and high schools, giving instruction to approximately 11,000 students. There are, moreover, eighteen higher institutions of learning for women attended by approximately 7000 students.

Furthermore, there are twelve seminaries and eleven preparatory institutes for teachers, two deaf and dumb institutes, six agricultural colleges, several industrial and trade schools, seventy-eight higher trade schools, twenty-two trade schools maintained by the mining companies, eight guild schools, six special trade schools and seventy-eight commercial schools.

The contrast to this brilliant provision for education will be found on the other side of the frontier, in Poland, where in many neighborhoods it is no unusual thing to find 35 to 50 per cent even of the shop-keepers absolutely illiterate, whereas, in general, the percentage of illiteracy is variously estimated at from 75 to 90 per cent of the entire population. In Upper Silesia, on the other hand, where attendance at school is compulsory, illiteracy is practically non-existent, and the condition of the people, in contrast with their less fortunate neighbors in Poland, furnishes most convincing evidence of the value of an education.

The educational institutions of Upper Silesia have been developed and brought to their present exceptionally high level during nearly two centuries of hard and devoted labors by the German State and District authorities and by the splendid system of administration under which the entire school system is conducted. Private interests, particularly in industrial circles, have co-operated with the State in the

way of many generous voluntary contributions made for educational purposes. The results achieved are to be seen everywhere—in the intelligence and enterprise of the native Upper Silesians, no less than in the high moral, religious, and social standards that prevail among them.

All of these uplifting and upbuilding factors are now asked to be placed in jeopardy by the proposed union with Poland. Such a calamity, if it should ever come to pass, would be unspeakable and, in its furthest consequence, as great a disaster for the world-at-large as for Germany alone. (Ha! Ha!)

Now Who laughs

卐

Sept, 1939

CHAPTER FIFTEEN

THE INTELLECTUAL RELATIONS OF SILESIA WITH GERMANY

Before the Teutons had finally colonized Upper Silesia, the Slavic inhabitants of the country had been obliged to content themselves with a few poorly endowed churches to which, as a rule, many scattered villages belonged. The German colonists, however, saw to it that nearly all the villages had their own parish church, provided with a good living. The rapidly increasing monasteries, mostly founded by German monks and thereby brought into contact with the German convents of their order, not only devoted themselves most zealously to the spiritual care of the people, but likewise to the improvement and development of agriculture and industry. Indeed, in later times many of the Bishops of Breslau were esteemed not only as protectors of art and science but also as political leaders, active in administration and sometimes in the performance of high executive functions. Bishop Conrad, descended from a race of Silesian princes defended the land, at the head of his contrymen, against the devastating invasions

of the Hussites. In still later times Melchior von Diepenbrock became a distinguished ornament of the Catholic Church and as Bishop of Breslau was highly esteemed as thinker, author and as the spiritual leader of his people.

The Reformation somewhat weakened the attachment of the Silesians to the Habsburg sovereign and by so much the more increased their attachment to Germany. Much interest was manifested in the work of the Wittenberg reformers Luther and Melancthon, although the Silesian Protestants did not in their entirety accept the rigid doctrines of Luther but preferred on the contrary to strike out on independent lines. One of the two authors of the Heidelberg Catechism, the well known creed of the Reformists, is Zacharias Ursinus of Breslau. The Silesian nobleman, Kaspar von Schwenckfeld, is the founder of the little community called after him and distinguished by a fervent religious life, which after many persecutions has found found refuge in North America.

Church and school being closely connected in the Middle Ages, the foundation of schools as well as the constructive work in the organization of the religious life of the people are the fruits of German colonization.

Of course, Upper Silesia's modern school system dates from time of its incorporation in the Prussian State in 1742, at which time a beginning was made

along the line of improved educational facilities for both classical and technical education. But modern research has shown that there was a surprising number of schools, in the Middle Ages, in the towns founded by German colonists and governed according to German law, not infrequently even the villages enjoying this advantage. In some towns only those who could read and write were admitted to the privileges of citizenship. Shortly before the Reformation, Breslau had no less than eight high schools to which travelling scholars streamed from all parts of Germany. There were, moreover, at the time of the Reformation, a number of higher institutions of learning in Silesia, akin to the university in their scope, notably Trotzendorf's famous school at Goldberg.

With the founding of the University of Breslau at the beginning of the eighteenth century, the higher educational development of Silesia entered upon a new stage and the work performed there by the zeal and genius of its scholars sheds lustre upon the whole land. Thus, the botanist, Heinrich Göppert, opened up new fields in the study of plant life; the astronomer, Gottfried Galle, enriched the field of astronomical science by the discovery of the planet Neptune and the bacteriologist, Ferdinand Cohn, led the way to the important discoveries in bacteriological science of his world famed pupil Robert Koch.

With the German colonization came the arts and letters into Silesia and among the early writings contained in the famous Manesse Manuscript, a composition of 7000 songs by 141 poets assembled by Johann Manesse at the beginning of the fourteenth century, we find some poetical songs by Duke Henry of Breslau written in the early days of German colonization in the thirteenth century. Other Silesian Mastersingers are likewise known to have composed their songs at about this time.

Even during the Thirty Years' War (1618-1648), a period of decadence, the inspiration of the Silesian poets did not die out, as the work of Martin Opitz, Andreas Gryphius and Friedrich von Logau fairly testify.

Indeed, the cultivation of German Renaissance poetry lay mainly in the hands of a group of Silesian writers of whom the aforementioned Martin Opitz was the leader. His *Book of German Poetry* is the text-book of the German Renaissance. Friedrich von Logau was an epigrammist of the very first rank, the greatest the history of German literature can point to. Gryphius wrote lyrics of an intense, almost modern sincerity of feeling. He composed two of the gayest and merriest comedies of the German seventeenth century *Herr Peter Squenz* and *Harribilicribrifax;* also a number of tragedies.

Among the most eminent writers of Germany in the last century are to be mentioned two Upper

Silesians, Joseph von Eichendorff and Gustav Freytag. The former is one of the very greatest of the Romantic singers and one of the most inspired lyric poets Germany possesses. To no other singer of his time does nature appeal with such alluring charm as to Eichendorff; his best inspiration he drew from the forests of his native province, and no one lived in more intimate communion with the "Great God Pan". Eichendorff is likewise the author of one of the most delightful of Romantic books, his *Aus dem Leben eines Taugenichts (From the Life of a Good-for-Nothing).*

Gustav Freytag was one of the greatest novelists of his day. His greatest novel *Soll und Haben (Debit and Credit),* a book that may reasonably be claimed as the most interesting German novel of social life of the middle of the century, appeared in 1855. This novel is now of particular interest and value to Germany and to the world in the light of all that has happened since the outbreak of the Great War. Freytag describes for us the commercial activity on which the prosperity of a nation depend, more than on its politics and he foreshadows the coming conflict between aristocracy and democracy. The conclusion of the story emphasizes the advantages of a conciliatory policy, between noble birth and commercial efficiency.

Mention has now to be made of one of the greatest authors of modern times, the Silesian, Ger-

hardt Hauptmann. Hauptmann wrote his first work in 1889—a drama entitled *Before Sunrise*. This was the beginning of a literary career in which Hauptmann tried his hand at more varied forms of literary, and more particularly, of dramatic works than any other writer of his time. In *The Weavers*, Hauptmann produced one of the most powerful dramas of this modern age. This was followed by other works of genius, known to all the world—*Hannele's Himmelfahrt*, *The Sunken Bell*, *Fuhrmann Henschel*, and *Rose Bernd*. In recent years Hauptmann has turned to the novel; his strange story of Christ in the modern world, *Emanuel Quint*, is full of undeniable imaginative power.

Among painters and sculptors of Silesia, mention must be made of the great court painter Adolph Menzel, of the Upper Silesian sculptors Theodor Kalide and August Kiss, and the painters Michael Willmann, Karl Lessing and Eduard Grützner.

In this brief sketch of the intellectual relations of Silesia with Germany, we have endeavored to signify the cultural unity of this entire region with all other parts of Germany. There can be no higher test of the modes of thought and feeling of a nation than is to be found expressed in its art and literature. These are what give expression to the soul of a nation and what make it a living force in history—past, present, and future.

In establishing the natural unity, the political

unity, and the economic unity of all of Silesia with Germany, the objectivity of facts and external conditions speaks a louder language than the subjectivity of feeling and emotion which is concealed beneath the surface. These latter, however, find their fuller expression in the country's art and literature and it is there that we find the final proofs we have been seeking for with respect to the all-important question of Upper Silesian nationality.

CHAPTER SIXTEEN

DENSITY AND MOVEMENT OF POPULATION IN UPPER SILESIA

No facts that we can present will more conclusively demonstrate the gigantic development of Upper Silesia since its incorporation into Prussia than the statistics with respect to population, namely, the figures as regards density and movement of population.

In the year 1804, about a half century after the incorporation of Upper Silesia in the Prussian State, the province of Upper Silesia had an aggregate of 577,370 inhabitants, an average of 47 per square kilometre *. The entire province was thinly settled. In the most densely populated parts, the concentration of population was scarcely equal to what is found today in the most unfruitful portions of East Germany. The towns were extraordinarily small. Oppeln had 3096 inhabitants, Gleiwitz 2899, Ratibor 3557, Beuthen 1848, whereas Kattowitz, Königshütte and Hindenburg (Zabrze) were as yet non-existent as municipalities. The largest town of all was Neisse, with a population of 7906. Neisse, however, belonged to Lower Silesia in 1804.

* A square kilometre = 0.386 sq. mile.

West of the Oder, the density of population was greater than eastward thereof. The districts of Ratibor and of Cosel had, respectively, a density of 50 and 66 inhabitants per square kilometre, presenting, therefore, a situation that was still quite mediaeval in outward aspect. The northeastern and middle portions of Upper Silesia, with only twenty inhabitants per square kilometre, were thinly settled forest lands. As for industry, its proportions were at that time so small as scarcely to deserve special notice.

In *Table 1,* hereinbelow, will be found the figures showing the density of population in the various governmental administrative districts of Upper Silesia in the year 1804.

The contrast with the foregoing state of affairs which we perceive a hundred years later, in the year 1910, is a most striking one. Our attention is here especially attracted to the great industrial district of southeastern Upper Silesia where we now find the greatest density of population, whereas other parts of the province are still comparatively thinly populated. Indeed, the measure of difference between the two is a tremendous one. In the northeastern districts, the density is still but 50—60 inhabitants per square kilometre, whereas in the industrial district it runs from 1000 to nearly 2000 per square kilometre, and the total population of the province is 2,250,000 or about four times the population of 1804.

Table No. 1. Density of Population in 1804

	District	Country	City	Total	Area in Square Kilometres	Inhabitants per Square Kilometre
1	Lublinitz . . .	20,162	2,526	22,688	1020,60	22
2	Gr. Strehlitz.	16,629	1,771	18,400	777,60	23
3	Tost-Gleiwitz	38,682	6,672	45,354	1458,00	28
4	Rosenberg . .	21,013	2,045	23,048	777,60	30
5	Oppeln. . . .	49,405	4,311	53,716	1166,40	43
6	Beuthen . . .	17,022	3,320	20,342	437,40	46
7	Pless	57,060	5,026	62,086	1206,40	49
8	Kreuzburg . .	16,666	4,625	21,291	388,80	50
9	Falkenberg. .	15,327	1,715	17,042	340,20	50
10	Cosel.	22,331	2,284	24,615	437,40	51
11	Leobschütz. .	64,289	7,261	71,550	1255,00	54
12	Grottkau. . .	26,964	4,248	31,212	583,20	54
13	Ratibor. . . .	44,584	6,509	51,093	729,00	65
14	Neustadt. . .	44,160	8,264	52,424	680,40	65
15	Neisse	50,513	12,046	62,559	777,60	66

This enormous increase is, particularly noticeable in the growth of the cities, as shown by the census returns for 1910, as follows:—

Neisse . . . . . 30,442 inhabitants
Oppeln. . . . . 33,907 „ „
Ratibor . . . . . 38,424 „ „
Kattowitz. . . . . 43,173 „ „
Gleiwitz . . . . . 66,981 „ „
Beuthen . . . . . 67,718 „ „
Königshütte . . . . . 72,641 „ „

The centre of gravity, so to speak, has shifted from West to East. Neisse, which was formerly the largest town, is now the smallest of the big towns. Königshütte, which in 1804 was merely an insignificant workmen's colony, is now the largest of these industrial centres.

Table No. 2. Density of Population in 1910

	District	Number of Inhabitants 1910	Total Area in Square Metres	Inhabitants per Square Kilometre
1	Lublinitz.	50,388	1,010,447	50
2	Rosenberg	52,341	898,778	58
3	Falkenberg	37,526	604,415	62
4	Grottkau	40,610	519,806	78
5	Gr. Strehlitz	73,383	895,585	82
6	Oppeln	117,906	1,407,551	84
7	Tost-Gleiwitz. . . .	80,515	879,988	91
8	Kreuzburg.	51,906	553,106	94
9	Neisse.	70,781	691,257	102
10	Cosel	75,673	675,510	112
11	Pless.	122,897	1,065,017	115
12	Leobschütz	82,635	690,764	120
13	Neustadt	97,537	798,951	122
14	Ratibor	118,923	836,545	142
15	Rybnik	131,630	853,003	154
16	Tarnowitz.	77,583	327,584	237
17	Kattowitz	216,807	181,683	1193
18	Hindenburg.	159,810	119,643	1336
19	Beuthen	195,844	98,923	1980

In estimating the density of population in the foregoing table, immense tracts of unsettled forest lands are included. If these enormous unpopulated areas were left out of consideration, the density of the various districts herein enumerated would thereby be greatly increased and perhaps present a truer picture of the real situation.

The districts to which reference is made in *Table 2* may be divided into three well-defined groups, as follows:—

1. Agricultural group:—Falkenberg, Grottkau, Rosenberg, Lublinitz, Kreuzburg, Neisse, Leobschütz, Gross Strehlitz.
2. Agricultural group in which likewise trade and industry play an influential part:—Gleiwitz, Tost, Neustadt, Oppeln, Cosel, Ratibor, Pless.
3. Purely industrial district:—Kattowitz, Hindenburg, Beuthen.

The cities of Tarnowitz and Rybnik are the entry ports, so to speak, to the industrial districts in their respective neighborhoods.

In *Table No. 3* hereinbelow set forth, we give the figures with respect to the movement of population between the year 1871 and 1910. This movement represents the changes in density of population of each district for the period mentioned, namely, the increase or decrease since 1871. This *Table* shows very clearly the marked change that has arisen through the shifting of the greater density from the

Table No. 3. Movement of Population

	District	Number of Inhabitants		Percent of Increase or decrease of population after 1871
		1871	1910	
1	Grottkau	44,279	40,610	— 9 %
2	Falkenberg	40.585	37,526	— 7 %
3	Neisse	70,825	70,781	— 1/10 %
4	Leobschütz	82,474	82,635	+ 2/10 %
5	Lublinitz	45,326	50,388	+ 11,2 %
6	Rosenberg	46,886	52,341	+ 11,6 %
7	Neustadt	86,315	97,537	+ 13,0 %
8	Cosel	64,984	75,673	+ 16,4 %
9	Gr. Strehlitz	61,264	73,383	+ 19,8 %
10	Gleiwitz-Tost	66,376	80,515	+ 21,3 %
11	Kreuzburg	42,043	51,906	+ 23,5 %
12	Ratibor	95,096	118,923	+ 25,1 %
13	Oppeln	89,371	117,906	+ 31,9 %
14	Pless	90,131	122,897	+ 36,3 %
15	Rybnik	74,111	131,630	+ 77,6 %
16	Tarnowitz	38,891	77,583	+ 99,5 %
17	Kattowitz	65,851	216,807	+ 229,2 %
18	Hindenburg	38,857	159,810	+ 311,4 %
19	Beuthen	45,832	195,844	+ 327,3 %

left to the right bank of the Oder. In the purely agricultural districts of the northeast and on both sides of the Oder, the population figures show little change. The entry ports to the industrial districts, namely, Tarnowitz and Rybnik, show a very marked increase (nearly 100 per cent), and the principal

Table No. 4. Movement Population to the Cities

City district	Number of Inhabitants			Percent of increase after 1871
	1804	1871	1910	
Neisse	7,906	22,490	30,442	36,3
Ratibor	3,557	21,421	38,424	79,4
Oppeln	3,096	12,728	33,907	166,4
Königshütte . . .	—	19,536	72,641	271,8
Gleiwitz	2,899	17,963	66,981	272,9
Beuthen	1,848	17,796	67,718	281,1
Kattowitz.	—	8,132	43,173	430,9

industrial district, Kattowitz, Hindenburg, Beuthen, show increases which are quite extraordinary—two to three hundred per cent and more.

Thus, within four decades, German enterprise and German commercial genius created one of the great industrial centres of the world, a "German Lancaster", and has made of this southeastern corner of Upper Silesia one of the most densely populated districts not only of all Silesia but of all Germany.

In the city centres, the movement of population displays a similar process of growth. But the degree of growth is dependent, in each case, on the extent to which the city in question has become the centre of industrial development as distinguished from the agricultural and semi-industrial centres. Neisse for example, in the centre of a purely agricultural neighborhood, shows but a small increase. Ratibor

and Oppeln, however, which are semi-industrial centres show a correspondingly greater increase, and finally the purely industrial centres show a four and five-fold increase.

CHAPTER SEVENTEEN

THE VITAL IMPORTANCE OF UNITY WITH GERMANY

The extraordinary industrial development of Upper Silesia and the changes in the movement and density of population indicated in the tables presented in the foregoing chapter, are the immediate outcome of the presence in Upper Silesia, in almost inexhaustible quantities, of that most important of all industrial products—coal. The importance of coal as an industrial product was at once recognized, with the invention of the steam engine. With the utilization of steam power for transportation purposes, the growth of population and industrial development in coal-producing countries, like England, Germany and the United States, took an upward swing that made these States, in the course of a few decades, the three most powerful nations of the world—commercially and industrially in a class by themselves.

To understand the reasons for this remarkable situation in the three countries named, it is necessary to remember that the essential fact of modern civilization on its material side is, that it is a power civilization. The chief source of power is coal, in

comparison with which other power resources are at present of minor importance and probably will for some time so remain. Iron, while an essential, is merely a container for coal energy and a tool by means of which it is exerted. Coal may, therefore, be regarded as the dynamic factor in modern materialistic civilization, and the fact that the United States, Great Britain and Germany are, comparatively speaking, the only great coal mining countries accounts for their preëminence in industry.

It was coal which, in Germany, caused changes in regional relations which were practically revolutionary. The coal-mining regions, like those of Upper Silesia, formerly barren and sparsely populated, now became the dynamic centres of society, attracting great populations whose numbers are far from representing the full industrial power of the regions.

On the other side, agricultural and raw material districts were thrown back entirely on their specialties, and a wide-spread exchange of goods set in. This made the question of transportation a matter of vital importance, and the further development of the Upper Silesian coal districts became a question of transportation facilities and traffic charges. For, the coal is there and can be mined and brought to the surface ready for transport under economic conditions which, in ordinary times, are quite favorable. Then arises immediately the problem of transport and traffic charges under conditions that

will make it possible for Upper Silesian coal to reach markets and find a profitable sale in competition with coal from other mining districts of Germany and from abroad. Thus, for example, before the war Upper Silesian coal has had to compete with British coal even in the markets of Berlin.

English coal reaches Berlin as follows, firstly, by water to Stettin and from there a comparatively short haul by rail makes it possible for the British exporters of coal to compete successfully with Upper Silesian coal, eighty per cent of which is still transported all the way to Berlin and elsewhere in Germany, by rail, as against only twenty per cent by water. The long haul from Upper Silesia to Berlin and the correspondingly high freight tariffs have hitherto made competition with British coal difficult. This fact, too, has shown Upper Silesian industry the importance of not neglecting their waterways. The development of water transport on a large scale was in fact only begun during the nineties, in the stretch of the Oder between Cosel and Breslau.

As a result of this new development in water-transport, Cosel has grown to become an inland port of ever increasing importance and of growing utility as transhipment centre. Thus the transhipment of coal at Cosel, in 1913, amounted to 2,258,000 tons and, in 1918, 2,873,000 tons. Moreover, 96 per cent of the raw materials shipped into the Upper Silesian industrial districts now come by way of

Cosel. These consist of imported iron ores, zinc-manganese ore and other minerals. At Cosel they are transhipped by rail to the industrial districts.

These facts are cited to show that where a relation exists between transportation and production to the extent that development of production depends for the most part on the development of transportation, there can be no future for Upper Silesian industry if it is forcibly severed by new State boundaries from all those arteries which sustain its very life.

Just as the Civil War (1860-1865) gave the final blow to political separatism in the United States, in a similar sense the war of 1870 gave the final blow to political separatism in Germany. And, as in the United States, so in Germany, it was the economic development that followed later which guaranteed that separatism would not be revived. For, this development produced in each country a regional specialization and a regional interdependence that is nation-wide in scope. Swarms of manufacturing cities on or near the coalfields, huge commercial centres, established arteries of transportation, and a wide spread circulation of goods to every individual, are evidence of this unity both in America and in Germany. This organism which grew in conformity with the economic resources of each country was the inevitable outcome of existing conditions in these countries. The production of wealth on a large scale and the sustaining of a large and ever

growing population were thereby made possible.

The same conditions have made both the United States and Germany the areas of intense economic intercourse. In Germany, as in the United States, the coalfields have become the centres of industrial activity drawing irresistibly to themselves huge populations and destroying local industries elsewhere. Here, also, great commercial cities have been built up and far-reaching arteries of transportation opened. Here, too, the agricultural districts have felt the loss of much of the local industrial activity as well as the pinch of a wider competition.

To carry the analogy a step further, it is only necessary to point out that the Upper Silesian coalfields play as great a part in the economic and, in the light of our argument, the political unity of Germany, as do the coalfields of Pennsylvania in the economic and political unity of the United States; and if an American will only picture to himself what it would mean for the United States to lose the coalfields of Pennsylvania, he will gain some idea of what the similar loss of the Upper Silesian fields would mean to Germany.

If it is the desire of the world-peacemakers to destroy a great nation and to drive a whole population of work-loving people to the verge of utter despair, then they have only to support the efforts of those who are agitating for the separation of Upper Silesia from its rightful German Fatherland.

CHAPTER EIGHTEEN

POLAND'S NEED AS COMPARED WITH GERMANY'S NEED OF THE UPPER SILESIAN COALFIELDS

Before the war the coal production of Upper Silesia was applied to supplying the fuel demands of the entire industry of eastern Germany, in so far as the same were not supplied by over-seas imports, and likewise to satisfying the requirements of Central Germany, and the eastern part of south Germany. Moreover, a not inconsiderable share of Upper Silesia's coal went to supply the needs of German-Austria and Bohemia (the present State of Czecho-Slovakia).

The question is now being sometimes asked, why can not these demands be supplied as usual, even if Upper Silesia should be transferred to Poland? Mr. Maynard Keynes in his great work *The Economic Consequences of the Peace* refers to this question and before answering it we shall quote, *verbatim,* what Mr. Keynes has to say on the subject, as follows:—

Pages 77 and 78 and footnote:—"Upper Silesia, a district without large towns, in which, however, lies one of the major coalfields of Germany with a production of about 23 per cent of the total German

output of hard coal, is, subject to a plebescite, to be ceded to Poland. Upper Silesia was never part of historic Poland; but its population is mixed Polish, German and Czecho-Slovakian, the precise proportions of which are disputed. Economically it is intensely German; the industries of Eastern Germany depend upon it for their coal; and its loss would be a destructive blow at the economic structure of German State."

In the footnote to this paragraph Mr. Keynes adds:—"It must not be overlooked, however, that amongst other concessions relating to Silesia according to the Allies' final note, there has been included Article 90 by which 'Poland undertakes to permit for a period of fifteen years the exportation to Germany of the products of the mines in any part of Upper Silesia transferred to Poland in accordance with the present Treaty. Such products shall be free from all export duties or other charges or restrictions on exportation. Poland agrees to take such steps as may be necessary to secure that any such products shall be available for sale to purchasers in Germany on terms as favorable as are applicable to like products sold under similar conditions to purchasers in Poland or any other country.'"

"This does not apparently amount to a right of pre-emption," continues Mr. Keynes, "and it is not easy to estimate its effective practical consequences. It is evident, however, that in so far as the mines

are maintained at their former efficiency, and in so far as Germany is in a position to purchase substantially her former supplies from that source, the loss is limited to the effect on her balance of trade, and is without the more serious repercussions on her economic life which are contemplated in the text. Here is an opportunity for the Allies to render more tolerable the actual operation of the settlement. The Germans, it should be added, have pointed out that the same economic arguments which adds the Saar fields to France, allots Upper Silesia to Germany. For whereas the Silesian mines are essential to the economic life of Germany, Poland does not need them. Of Poland's pre-war annual demand of 10,500,000 tons, 6,800,000 were supplied by the indisputably Polish districts adjacent to Upper Silesia, 1,500,000 tons from Upper Silesia (out of a total Upper Silesian output of 43,500,000 tons), and the balance from what is now Czecho-Slovakia. Even without any supply from Upper Silesia and Czecho-Slovakia, Poland could probably meet her requirements by the fuller exploitation of her own coalfields which are not yet scientifically developed or from the deposits of Western Galicia which are now to be annexed to her."

Firstly, it will be noted from the foregoing extract, that Mr. Keynes answers the question with respect to Poland's need of the Upper Silesian coalfields, emphatically in the negative. There then remains

the question we have put at the beginning of this chapter, namely, why cannot Germany's demands, and the demands of Bohemia and German-Austria who formerly depended upon Upper Silesian coal, be supplied as usual even if Upper Silesia is transferred to Poland?

Mr. Keynes has cited Article 90 of the Treaty as evidence that the makers of the Treaty understood the nature of these claims and made some attempt, at least, to take care of these demands in the future, provided Upper Silesia became Polish territory. Mr. Keynes himself has some doubts of the effectiveness of Article 90 to accomplish the desired results. He makes the following reservations:— firstly, the mines would have to be maintained at their former efficiency; secondly, Germany will have to be financially able to purchase substantially her former supplies; thirdly, there is no right of pre-emption granted to the Germans by Article 90 and the Poles might accordingly refuse to sell to them or might otherwise dispose of the surplus production, if any, in a manner not anticipated by the Treaty.

There are, however, some additional reservations which Mr. Keynes would no doubt have made if he had devoted more time to the subject. Firstly the amount of coal mined, if production goes over into Polish hands, may run short of the demand due to the fact that consumption is everywhere on the increase, whereas production in every country

is sinking further and further below pre-war levels. Accordingly, it is to be expected that the coal demand in Poland will grow enormously and that she will, therefore, have no coal for export. The Poles have enough of a supply of coal of their own, but their mines have not been greatly exploited and are still in an undeveloped state. It is greatly to be feared, however that if they gained possession of the Upper Silesian mines, the Poles would neglect their own mines which would, therefore, continue to remain unworked for lack of the enterprise and the capital to develop them. Secondly, there is the human factor. The Poles hate both the Germans and the Czechs and as political opponents, as well as from considerations of natural hostility, would leave no stone unturned to weaken their foes. At any rate it is to be expected that Poland would make any concessions in this regard dependent upon the yielding of some political advantage to her, and it will, by no means, be difficult to give color to the proceeding in view of the fact that surplus supplies, under Polish control will be small and it would be possible to use them to satisfy Russia's requirements as easily as to supply the needs of Germany and Bohemia. Lastly, there is the consideration that the population of the area to which Upper Silesia has hitherto furnished coal is 35,000,000 whereas the entire population of Poland is but 16,000,000, and it is scarcely necessary to suggest

what a catastrophe it would be for these 35,000,000 people—to their industry, commerce and agriculture—if by one political stroke they were to be deprived of the coal supplies upon which they have depended and upon which their entire economic existence is based. Poland, on the other hand, as Mr. Keynes has justly pointed out, does not need these mines and it would be merely "carrying coals to Newcastle" to give them to her.

APPENDIX A

UPPER SILESIAN STATISTICAL, GEOGRAPHICAL, GEOLOGICAL AND OTHER DATA

Geographical:—Extreme eastern point, 36° 55′; extreme western point, 34° 34′. The parallel of latitude passing through Oppeln likewise passes through Stockholm, Bromberg, Brindisi, Windhook and Cape Town.

Extreme northern point, 51° 10′; extreme southern point, 40° 51′. On the fiftieth parallel of longitude running through Loslau in Upper Silesia are likewise Mayence, Calais, the Lizard Cape, Winnipeg, Vancouver, Charcow in Russia and Blagoveshchensk in Siberia.

Highest elevation, 571 metres near Bishop's Peak (Bischoffskoppe). Lowest level, midstream of the Oder as it crosses from the Oppeln District of Upper Silesia into Central Silesia. Mean variation of elevation, 72 metres.

From the western boundary of Upper Silesia to Rotterdam, 900 Kilometres, to Hamburg 600 Kilometres.

Climate:—Warm summers, cold winters. Mean

temperature in July 18° to 19° C. (66° to 68° F.); in January—2° C. (28° F). Warm days, cool nights. The highest temperature in summer does not usually exceed 30° C. (86 F.) and the lowest temperature is rarely below—15° C. (5° F.). The mean annual temperature of the Oder Valley in Upper Silesia runs from 8° to 8.5° C. (41° F.). The winter seasons are usually interspersed by intermittent periods of mild weather and are commonly succeeded by an early spring or at any rate by a seasonal spring that permits the preparations for tilling the soil to go forward without precipitation. Rains are heaviest in summer and spring. The autumn is drier and the winter season has the least precipitations of moisture to record.

The yearly average rainfall in the Oder Valley varies between 23.62 and 27.56 inches. In the forest districts the average fall usually exceeds the last named figure. In the neighborhood of Annaberg and in the higher country about Rybnik the average annual rainfall amounts to 31.50 inches. There is much fog in the industrial districts. In summer the northwesterly and in winter the southwesterly winds bring moisture.

Area of Upper Silesia:—13,230.36 square kilometres (approx. 5000 sq. m.).

Area of Germany (prior to Peace of Versailles):—544,875 square kilometres (203,176 sq. m.).

Population:—Germany (1910), 65,925,993.

Upper Silesia (1910), 2,207,981 divided as follows:—1,169,340 Polish (namely, *Water-Poles* or mixed); 884,045 German; 57,347 Czech; 7,752 of sundry foreign origin, 89,497 bilinguists (namely, are brought up to speak German and one other foreign language interchangeably and with equal facility).

Religious denominations: — Roman Catholic, 2,000,066; Evangelical 187,751; other Christian denominations, 1896; Jews, 18,268.

Geological:—Upper Silesia owes the present features of its landscape to the earth movements of the Diluvial Age. According to geologists, the mammoth masses of ice and snow of the northern glaciers shaved away the elevations left behind by earlier earth periods and filled up the valleys with their accumulations of earth, dust and rubbish. In the moraines thus formed, some remained uncovered and free to the open air, others, however, came to underly sand-beds which formed themselves above them. The former make the arable lands of Upper Silesia, whereas the latter furnish a soil upon which only the pine is able to flourish. In the wet and low-lying marsh lands ironstone formations are found. Through upward movements of the earth's interior, breaking through the crust, sand was brought to the surface which, mixing with the rich clays of the neighborhoods, produced the fertile loam ground in

the vicinity of Leobschütz; and in the Rybnik and Annaberg regions.

The ice-age did not, however, destroy all traces of earlier periods of the earth's formation. For, in the vicinity of Hindenburg (Zabrze), Beuthen and Myslowitz, as also in the neighborhood of Rybnik and Nikolai, are found the coal-beds, an extension of which is also found in the region that touches the former frontier of Austria in the vicinity of Hultschin.

To the north of the coal fields and in part overlying them at its eastern extremity, lies the great limestone ridge, (Muschelkalkrücken) a formation that belongs to the Mesozoic or Secondary group of rocks, of the Triassic system. This limestone ridge is valuable at its western end for the supplies of building-stone, limestone for fluxing the blast furnaces, and at its eastern end it contains rich stores of lead, zinc and iron ores. To the north of this ridge and beyond the River Malapane, the upper geological formation consists of Keuper Marls which, however, is buried beneath the sand which overlies them in this region, but come to the surface in the fertile plains of Poland beyond the frontier. In this Keuper Marl formation, iron is found in the neighborhood of Rosenberg. Round about Rybnik the rock formations are of the Tertiary group and of the Miocene system. In the neighborhood of Carlsruhe and in the region lying between the River

Oder and the River Neisse north of a line running through the towns of Krappitz and Neisse, the rock formations are likewise of the Tertiary group but of the older Oligocene system, so rich in plant life, which has been preserved here in the extremely workable turf, lignite and brown-coal beds. In various districts, particularly in the neighborhood of the Sudetic mountains along the southerly frontier, other rock formations are to be found. The Annaberg, about 1300 feet high, situate approximately ten miles southwest of Gross Strehlitz, contains beds of basalt, and it is a noteworthy fact that it is the most eastern point in Europe where basalt can be found.

In the hilly Rybnik-Pless neighborhood, where are to be found heavy formations of the post-Tertiary Diluvial Age, the great forests of coniferous trees flourish in a marvellously rich abundance, harboring a great variety of wild game, and notably (north of Pless) a herd of bison (bison Europaeus).

The left bank of the Oder is notable for the rich fertility of its soil due to an earth formation of mixed clay and sand forming a loam bed in which the requisite constituents for fruitfulness are present in just the right proportions. In the rolling country that stretches forward to the Sudetes on the South, these loam-beds are found to have a depth of twenty to twenty-six feet. Here and there occasional faults in the earth's crust exhibit outcrops of rock that belong to earlier periods, among which

are to be named basalt, gypsum and the ironstone of the Hultschin neighborhood.

Numerous traces of the Ice Age are to be found in various parts of Upper Silesia, among which are particularly noteworthy the great boulders "Teufelsstein" in the Laband forest; the "Christusstein", round as a cannon-ball, near Gross-Stein; the two quartz boulders in the Hubertus ravine near the Annaberg. The insect world likewise furnish some relicts of the Ice Age among swampy forests near Panewnik-Idaweiche and Bielschowitz. The numerous ponds and lakes of Upper Silesia contain some of the rarest fauna to be found anywhere in the world which are valuable both for their geological and botanical interest.

Minerals:—Besides its great stores of coal, Upper Silesia possesses valuable deposits of zinc, lead, iron ore, limestone, dolomite, brown coals, turf, sulphur ore, rock salt, sandstone, clay, gypsum, marble and basalt.

The zinc deposits are found in two strata-like fields in the neighborhood of Beuthen and Tarnowitz at a depth running from 150 to 300 feet.

The limestone fields are of almost unlimited capacity. Bank upon bank of limestone is found of which the thickness runs as high as 225 feet in one single bank.

Of especial importance to the cement industry

are the rich clay and lime fields in the neighborhood of Oppeln.

The production of iron ore has greatly fallen off in recent years. In 1887, it amounted to 605,675 tons and in 1917 production had fallen to 59,821 tons.

The zinc and lead mines produced as follows:—

1882 . . .	34 works . . .	642,284 tons
1900 . . .	29 „ . . .	576,305 „
1913 . . .	22 „ . . .	601,869 „
1917 . . .	15 „ . . .	454,162 „

The production of pig-iron shows the following figures:—

1887	395,010 tons
1900	836,856 „
1913	994,601 „
1917	752,395 „

In view of the great falling off in the production of iron ore in Upper Silesia, ores from other parts of Germany and from abroad have been employed in the manufacture of iron in increasing amounts. The following table shows the amounts employed, respectively of Upper Silesian, foreign and ore from other parts of Germany:—

	Upper Silesian Ore.	Foreign Ore.	Ore from other parts of Germany.
1900	547,071 tons	548,288 tons	103,302 tons
1913	178,958 „	576,028 „	339,935 „
1917	85,339 „	553,224 „	321,829 „

The zinc smelting furnaces produced:—

1882	95,340	tons
1900	143,994	„
1913	225,820	„
1917	147,708	„

The cement, in the neighborhood of Oppeln, produced and shipped in the year 1913, 4,226,002 barrels of cement weighing 170 kg. (375 lbs.) per barrel.

The figures for coal production are as follows.

	No. of works	No. of workmen	Tonnage
1800			41,140
1820	28	974	146,782
1840	91	3,874	538,556
1860	89	12,759	2,478,276
1880	105	32,290	10,016,520
1900	57	70,202	24,829,284
1913	63	123,349	43,801,056
1917	63	147,550	43,031,148
1918	63	150,110	39,968,351

The coke ovens and cinder works produced as follows.

	1912	1918
Cokes	1,939,619 tons	2,517,769
Cinder	145,893 „	217,189
Tar	152,933 „	134,920
Sulphate of Ammonia	35,072 „	31,747
Benzol	—	29,855

In the manufacture of coal brikets a marked increase is shown from 383,212 tons in 1912 to 567,469 tons in 1918.

Railway freight traffic:—The total freight traffic for the year 1917 was as follows:—

In Upper Silesia	12,037,083 tons
Shipped to other parts of Germany.	19,454,455 „
Shipped to foreign countries . .	10,102,418 „
Received from other parts of Germany	3,449,145 „
Received from foreign lands. . .	1,443,568 „

Omitting coal shipments from the above figures we have the following results:—

In Upper Silesia	6,858,598 tons
Shipped to other parts of Germany.	15,377,164 „
Shipped to foreign countries . .	8,672,123 „

Shipments by water show that there were sent and received by way of Cosel Harbor on the Oder in 1918 goods amounting to 2,580,326 tons; by way of Oppeln Harbor on the Oder, 305,369 tons.

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APPENDIX C

THE JEWS IN UPPER SILESIA

Although the total Jewish population of Upper Silesia is only approximately 20,000, less then one per cent. of the total population, they have taken part in the cultural, commercial and industrial development of the province in a measure entirely out of proportion to their numbers, and their importance in the community is to be estimated entirely on a qualitative as distinguished from a quantitative basis.

In some of the higher institutions of learning in Upper Silesia one finds the proportion of Jewish students to run as high as twenty per cent of the total, and in general they constitute from ten to fifteen per cent of the entire student body in the upper schools and colleges. The prosperity of the Jews in Upper Silesia is indicated by the fact that in spite of forming so slight a percentage of the population, thy contribute an extraordinary percentage of the taxation levied. Thus in such places as Kattowitz, Ratibor, Rybnik and Neustadt they pay all the way from 30 to 55 per cent of the taxes. In a number of other places 10 to 15 per cent.

In the Government service in Upper Silesia one

finds that, generally speaking, from one-fourth to one-third of the positions are filled by Jews, and in the management and directorship of the leading industrial enterprises their position is a very flattering one. But it must not be imagined that they have devoted their energies exclusively to trade and industry. Thus in Kattowitz an industrial centre with a population of 50,000, the Jewish population contributes eight lawyers, three chemists, seventeen physicians, four dentists, two judges, four educators in the higher schools, one Government councillor, one Government architect. And, in general, it is to be said that the liberal professions in Upper Silesia are practised by a large number of Jews. Nor are they behind hand in philanthropic work to which they devote much time, energy and money.

Special mention has to be made of the preponderant part played by the Jews in the great industries of Upper Silesia. The history of their participation in the great work of industrial development goes back to about 1840. At about that time Moritz Friedländer, Sinai Levy and David Lowenfeld established blast furnaces and smelting ovens at Friedenhütte which later were consolidated and made into a stock company known as the *Oberschlesische Eisenbahnbedarfs Aktiensgesellschaft*, an organization that is today the largest of its kind in Upper Silesia.

The well-known iron and steel-works, *Bismarks-*

hütte, was founded by two Jewish merchants, Elias Sachs and Solomon Hammer. Chairman of the Board of Directors is Sigismund Born. The extensive iron-pipe and tube works of the Huldschinsky Company was founded by Moritz Hahn and Simon Huldschinsky. The Upper Silesian Iron Industry Company with its smelting and steel works known as the *Julienhütte* and *Baildonhütte* was founded by M. J. Caro and Son and a member of that family, Oscar Caro, still serves as Chairman of the Board of Directors. One of the largest enamel works of Germany, the *Silesia* of Paruchowitz was founded by the brothers Lachmann. The iron and steel company *Ferrum* at Beuthen was organized by the well known railroad builder Rudolf Pringsheim. The Upper Silesian Zinc Foundries Company was founded mainly by the merchant Heimann Roth of Breslau.

The Upper Silesian Coke and Chemical Works was established by the firm of Emanuel Friedländer at Gleiwitz by a consolidation of their own works with the works of M. J. Caro and Son, and later by an amalgamation with the large coke-oven industry, Glückauf, owned by two able and enterprising Upper Silesian Jews, Hermann Zerkowski and Dr. Moritz Mannheimer.

In the coal-mining industry Otto Friedländer established a foremost place for himself, by opening and developing the important *Heinitz* mine, and later Fritz Friedländer in association with Baron

von Rothschild and the Banker Sternberg, orginized and established the coal-mining industry in the Rybnik district.

Outside the iron, steel, zinc and coal-mining industries we find the Jews prominent as owners of Upper Silesia's leather, textile and cigarette factories and mill-works, and also in the Portland-Cement and lime industry. Rudolph Pringsheim, already mentioned, and Eugene Siegheim did much to solve the railway transport problem in Upper Silesia.

Other important enterprises in Jewish hands are the well-known coal company of Caesar Wollheim and Emanuel Friedländer and Co., the important iron firm of Rawack & Grünfeld, and the important lumber concerns of S. Goldstein, S. Grünfeld, W. Sternberg, S. Fuchs and Max Moeller.

THE UPPER SILESIAN QUESTION AND GERMANY'S COAL PROBLEM

BY SIDNEY OSBORNE

TWO PARTS IN ONE VOLUME

PART TWO

CHAPTER ONE

SOME GEOLOGICAL DATA WITH RESPECT TO COAL

Everything we use, whether it be a natural or an artificial product—our food, clothing, and all our goods—everything, without exception, comes from the earth and coal, the most important of all our commodities, is that one of the earth's products whose natural history will best repay us to study. For, as Jevons put it in his remarkable book on *The Coal Question* (1868) "Coal in truth stands not beside, but entirely above, all other commodities. It is the material source of the energy of the country—the universal aid—the factor in everything we do. With coal almost any feat is possible or easy; without it we are thrown back into the laborious poverty of early times.... The progress of science, and the improvement in the arts, will tend to increase the supremacy of steam and coal."

As we all know from our early day studies in geology the land on which we live is constantly dissolving, is being worn down and carried away by the action of the rain, wind, frost, and running water. The sea receives it all. Every moment,

day—in, day out, week in, week out and year by year, a gigantic load of suspended and dissolved material is borne out to sea by each of the thousands of rivers in the world. Every frost and every hot day loosens the material of the earth's surface by splitting it up and drying it to dust, and every rainstorm carries this loosened material, dust and pebbles, by countless runnels, into the streams which flow down to the rivers and out to sea. This slow process never stops. Above all it never works backward. Once a pebble on a slope has been dislodged and is washed downward it can never return. And this is true of every particle of every hill above sea level. The hills all over the world are gradually being carried out to sea, particle by particle, and never by any chance is any being replaced.

What happens to the material so carried away and distributed over the ocean floor? The pebbles and coarse sand are deposited just round the coast and lie more or less evenly over the floor of the sea. The lighter material is carried much further out to sea and is deposited in the ocean depths as mud. Besides these sandy deposits close to land and muddy deposits out at sea, there is another kind of deposit being formed on the ocean floor. The shells and hard parts of millions of small shell-fish are constantly accumulating as these creatures die. Living in colonies where the temperature and

condition of the water are suitable, their shells accumulate in the same part of the sea-floor for ages. These animals are endowed with the power of extracting the lime dissolved in the sea-water and making their shells from it, so that the accumulation of their dead bodies is made up of lime.

These formations of sands, muds and shells have gradually formed layers, many of them hundreds of feet thick, the oldest resting on the bottom, and in the course of ages have become stratified deposits of sandstone, clay and limestone on the floor of the ocean.

We have noted the fact that the land is constantly being worn level and the mountains carried out to sea. As this process has been going on for innumerable ages, how is it then that the continents have not been entirely washed away? The answer to this question is that the crust of the earth upon which the rain falls is not stationary, but is constantly moving. Some parts of the world are gradually being forced upwards out of the sea, and others are gradually sinking. As a rule, these movements take place so gradually that we are entirely unconscious of them, but often the movements are so sudden as to cause severe earth tremors noticeable to the inhabitants. We know these phenomena as earthquakes.

Thus, many times during the history of their formation, portions of the continents have been

entirely covered by the sea, and while they formed the ocean bed, great deposits of sands, clays, and limestones were spread out over the area they occupied. These deposits accumulated until they were thousands of feet in thickness. Gradually these areas rose again from the sea until dry land appeared. The sands and clays which had collected at the sea bottom now formed the mountains and hills of the new land and the original process of washing away and spreading their material in the surrounding seas began anew.

Now if we take a journey across England or across Germany we shall find the remains of these old deposits which were formed ages ago while the sea occupied the place where England and Germany now are. Whichever way we go we shall soon find, in either one of these countries, hills of limestone or sandstone and valleys of clay. The Upper Silesian coal basin of which we are going to treat in this volume, like the English, Belgian and Rhenish-Westphalian coal districts, were anciently all a part of the great land coastal regions or basins that were subject to frequent inundation from the sea. Thus England, Belgium and Germany are largely made up of old deposits of sandstone, clay and limestone which were originally laid down in the beds of successive oceans.

If we continue our search into various parts of the countries named we should discover large tracts

of land made of granite. This granite has a very different origin from that of the formations we traced to the bottom of the sea. Granites and rocks like them are formed by the cooling of the molten interior of the earth, and we are able to observe their formation from the molten state when volcanoes are active. Volcanoes are the vents or pipe-lines which lead down to the molten reservoirs beneath the earth's crust. Sometimes the molten granite boils up the vent and spreads out as lava on the earth's surface where it rapidly cools. As the molten rocks cool they crystallize, and the crystals formed may often be distinguished with the naked eye. Sometimes they fit into each other like a piece of mosaic work. But in other rocks the crystals are too small to distinguish without a microscope.

The crystalline rocks formed by the cooling of the earth's crust are naturally the oldest formations. They were the first solid crust to be formed on the earth when it cooled down from its incandescent condition. They contained all the metals and valuable materials we now make use of.

Summarising now the facts set forth in the preceding pages, we find that the oldest rocks on the earth are the granites, which were formed by the cooling of the earth's crust from the molten condition. Sands, muds and limestones were divided from these granites by the agency of rain and running water. These sands, muds and limestones were laid on the

ocean bed as sedimentary rocks. By the gradual movement of the crust of the earth, these sedimentary rocks on the sea floor have become land and have themselves been weathered away and again carried out to sea. Then the area has sunk beneath the sea and fresh deposits have been laid down on the remains of the first. This process has been repeated many times and the rocks which now form the land of England, France, Belgium and Germany are the remains of the original granite crust, and the successive formations of limestone, sandstone and clay which have been deposited upon that crust, one upon the other, at successive epochs. Indeed, according to the findings of geology, the Alps were the last great mountain range to be heaved up from the bottom of the sea.

Coal is a specially valuable deposit quite separate from the various kinds of rocks we have considered. Its mode of formation is also unique. Coal is the hardened and consolidated product of ancient forests. The trees which flourished in the swampy coal forests are unlike any in existence today. But their remains can be clearly discovered as fossils in the coal itself. Forest upon forest of trees lived and died in the places where our coal mines now exist, and when hundreds of feet of dead leaves, trunks and roots had accumulated, the whole area was submerged and covered by an impervious red marl. Its valuable carbon was thus protected until it had formed solid

coal. In the course of time, the abundant forest remains have been compressed to a few feet—the thickness of an ordinary seam.

Now, for a proper understanding of the coal question it is not only necessary to know what coal is and the mode of its formation, but it is likewise necessary to know among what geological formations it is to be found, under what conditions, and something as regards the geological tests that establish the age and evolution of formations in the earth's interior. Briefly, then, the age and evolutionary record of rocks have been determined by geologists in various ways. As to age, there is firstly the test of superposition, that is to say that where formations lie upon one another, it usually follows that the one above is younger than the one it rests upon. But we should take notice that in rare cases this test must be abandoned where the area examined has been folded or faulted, or in other words where certain earth movements have caused the crust to be broken through in such a way that the true order of formations has been reversed, and the older formation has actually been brought to rest on the younger. The age of an igneous rock is decided by the age of sedimentary rocks around it. It must be younger than the youngest beds it affects. If fragments of one formation, A, are discovered incorporated in another formation, B, then B is partly derived from A and A must therefore be older.

Again, the finest evidence of the age of a formation is given by the fossils which occur embedded in it. The animals and plants which inhabit the globe at the present time are the successors of earlier types, different in appearance and form. There was a time when man had not appeared upon the earth. Earlier, no mammals, such as horses and cattle, tigers and camels, existed. Earlier still birds were absent; earlier again reptiles; and earlier yet, fish. What use can the geologist make of this evolutionary record? He can use it as an index to the age of a formation. Each formation contains the vestiges of animal or plant life in a fossil form, and each particular variety of animal or plant occurs only in definite formations, perhaps only in one. This is often such an accurate guide that every few inches of a formation may contain some characteristic fossil. If this fossil is found in some other district, the geologist knows at once the precise age of the formation in which it occurs, and similarly if the geologist knows the age of a certain formation in a certain district by one of the tests already referred to, he will know the age of rocks in another district which exacly match the known formation.

Accordingly, guided by the foregoing rules and principles, geologists have divided the stratified rocks into three main groups, which we give below in the reversed order of their age.

(3) Cainozoic or Tertiary Rocks, the age of forms of life more closely allied to those in existence today.

(2) Mesozoic or Secondary Rocks, the age of enormous reptiles, birds and mammals.

(1) Palaeozoic or Primary Rocks, containing vestiges of the most ancient forms of animal and plant life. Each of these groups is again divided into systems, a short list of which, for the better comprehension of what follows is given below. *

Now the principal formations we have to consider are those of the Carboniferous system, namely the Limestones, Grits and Coal Measures. These are the coal-bearing rocks, and wherever they occur in the world as in the Lancashire, North Staffordshire, Cheshire, and other coalfields in England, the Appalachian coalfield in the United States extending from Pennsylvania all the way to Alabama, and the German coalfields of the Ruhr and Upper Silesia, they are rich in coal or oil.

The Carboniferous or Mountain Limestone is the oldest formation of the group. It is a massive limestone, grey in color, yielding good building stone and marble. As the name indicates, Mountain Limestone forms hilly ground. It is commonly cavernous with underground streams.

Millstone Grit comes next in order overlying the limestone. It is a hard sandstone which renders it excellent for grinding. Because of its extreme hardness and powers of resistance to weather, it is used

* See next page.

Groups	Systems	Formations later referred to
Tertiary	Miocene and Oligocene	Clay ironstone, Brown coals Gypsum, Sulphur, Rock salt
	Eocene	Clay, Lime, Sandstones
Secondary	Cretaceous	Chalk Gault Greensand
	Jurassic	Upper Jurassic clays Oolitic Limestones Lias
	Triassic	Keuper Marls, Limestone Bunter, Triassic or Red Sandstones
Primary	Permian	Magnesian Limestone or Dolomite, Sandstone
	Carboniferous	Coal Measures Millstone Grit or Hard Sandstone Carboniferous or Mountain Limestone
	Devonian	Old Red Sandstone, Dolomite
	Rocks older than Devonian, viz Silurian, Ordovician Cambrian etc.	

for the construction of dock walls, reservoirs, bridges, and embankments.

The Coal Measures which constitute the third formation in this series of coal-bearing rock, are thousands of feet in thickness. But they do not consist of solid coal. The coal forms beds, sometimes only a few inches thick, sometimes a few yards, followed by beds of sandstones or shale, and then perhaps more coal, or a thin band of iron ore. The shales and sandstones frequently make hilly country.

It must not be thought, however, that these three formations invariably appear together where coal is found. For instance none of the coalfields of the Midlands, South Staffordshire and the Severn valley in England, is accompanied by Millstone Grit and Mountain Limestone. And the same is true of some of the coalfields in the German coal basins. Instead, the Coal Measures rest upon much older rocks, upon Silurian, Ordovician or Cambrian. In the technical language of geology the Coal Measures in such cases are said to be *unconformable* to the older rocks beneath them. This means simply that a great earth movement had taken place between the time of the older beds and the time of the formation of the newer beds—thus shifting their positions.

If the reader is beginning to wonder what all this geological data has to do with the subject-matter of this book, we are soon to enlighten him. In the first place we are treating of the coal problem,

and the coal problem as it affects any one single country like Germany or England becomes at once a world problem for reasons which have primarily to do with its unexampled importance as a commodity. But a study of the coal problem makes it necessary for us to understand, as we have already pointed out, not only the nature and composition of coal, but the different classes and varieties of it met with in our coalfields, and we have, moreover, to consider the kind of materials from which it originated, as well as the conditions under which these materials were, in the fulness of geological time, gradually transformed into the coal seams as we now know them. Now, in the main, and speaking generally, the facts underlying these inquiries, in so far as the coalfields of Germany, Great Britian and the United States are concerned, are pretty much the same, for, a consideration of the geographical distribution of the world's principal coalfields shows that all the important fields adjacent to the North Atlantic and Arctic areas (which include nearly all the fields of northwest Europe and the eastern part of North America) originated in what geologists call the Carboniferous Period of the Primary Era, whereas coal in other parts of the world, as for instance the Indian Ocean group of coalfields, originated in a somewhat later period and we even find coals in certain parts of the world which originated in the Secondary and Tertiary Eras. The consideration

of this part of our problem is therefore simplified by the fact that we have to do only with the great coalfields of the Carboniferous System, whose characteristics are very much alike in view of the fact they all originated under similar conditions in a new monster vegetation flourishing in a rich virgin soil, with an equable if not subtropical climate, and large areas of shallow sea, to which great quantities of sediment were borne from rivers. What actual differences exist between the various coalfields of the Carboniferous Period, whether in England, in Germany or in America, maybe explained either by the variations in earth movements causing foldings and shiftings of the earth's structure or to the fact that the vegetable *débris* to which the coalfields owe their origin was transformed into coal, in some cases, upon the very site of the original vegetable growth, and in other cases the coalfields owe their origin to enormous masses of vegetable *débris* brought down from higher levels and deposited either in deltas or in landlocked seas or lakes.

Moreover, it is these differences in respect both of the character of the original organic *débris*, and of the physical conditions under which it was deposited and subsequently transformed in the coalflelds, that have contributed to produce the innumerable grades and varieties of coal, ranging from highly bituminous gas coals to anthracites such as are found in British coalfields and in Pennsylvania.

CHAPTER TWO

THE GEOLOGICAL FORMATIONS OF UPPER SILESIA

The development of the Upper Silesian mining industry bears a very close relation to the geological studies and researches made after the discovery of the very valuable zinc and lead ore deposits in Upper Silesia which were found to lay immediately above rich and valuable seams of coal. After this discovery, systematic research revealed the geological relationship to one another of the various formations, and this, leading to investigation of the formations over a wider area, ultimately led to the discovery of new and important coal and ore deposits.

The Upper Silesian coal district lies in the south-eastern part of Upper Silesia between the regions watered by the upper courses of the Oder and the Vistula, and a description of this region may be in order. The Oder, then, finds its origin in the East Sudetic mountains within the present State of Czecho-Slovakia but within a few miles of the Upper Silesian or Prussian frontier. The Sudetic mountains are an Alpine range, the geological origin of which is to be found in the Carboniferous Period, and are the

source of the Oder which flows, throughout its length, excepting the few miles to which it owes its birth in non-German territory, through Prussia, and in its early stages through the rich and fertile loam-covered fields which constitute the foreground of the Sudetes of Silesia, broken here and there by sporadic vestiges of the old Sudetic rocks. The river region of the Upper Vistula in the South belongs to younger Tertiary mountain-fold formations of the Beskidian Carpathians. These two mountain systems come in contact with each other in the region of the River Olsa, a tributary of the River Oder, arising in Austrian-Silesia and flowing in a northwesterly direction through Teschen and into the Oder near Oderberg on the Prussian frontier. In consequence of this contact between two distinct mountain systems belonging to different geological Periods, the structural appearance and the relation of the formations to one another are varied and complex.

The water-shed between Oder and Vistula, dividing the Pless from the Rybnik district, both of which are rich in coal formations, is but slightly elevated in the South. Further north it rises gradually, merging into the ridge, rich in coal seams, of the Orzesche-Nikolai-Emanuelsseggen coalfields. This ridge is, in turn, merged into the carboniferous hills of Königshütte and the great Limestone and Dolomite ridge (Muschelkalkrücken) at Radzionkau and Trockenberg.

As an evidence of the individual and distinctive

character of the Upper Silesian coalfields it is to be noted that the Sudetic rock formations which appear in the south in West Galicia and in Russian Poland, do not form the under-formations of the Upper Silesian district. The Upper Silesian coal basin, taken as a whole, is accordingly not to be regarded as fore-ground of the Sudetes. In the south between Vistula and Oder the formations, as already indicated, possess a greatly mixed character which bespeak partly a Sudetic, partly a Carpathian origin. But, as stated, taken as a whole, the Upper Silesian coal district is geologically a distinctive region possessing its own special characteristics. The Limestone and Dolomite ridge, above referred to, is an example of one of these special characteristics which, if space permitted, would form material for much interesting study. Indeed, the principal coal and iron district of Upper Silesia, in the Beuthen-Kattowitz-Hindenburg region, possesses a particularly characteristic and distinctive geological structure consisting of formations of the Trias Period, younger therefore than the Carboniferous which is more general in Russian Poland and in West Galicia. Indeed, in the comparatively small and narrow coal and iron district referred to, ore-bearing seams come right through to the surface and are rich in a multitudinous variety of ore formations. Such a phenomenon will be found nowhere else in any of the neighboring lands.

We thus perceive the factors which assure Upper Silesia a dominant position among the industrial districts of the world to consist of its complex array of zinc, lead and iron ores intermingled with coal, the presence of numerous coalfields of good quality and possessing a capacity but seldom found elsewhere, and composed of seams easily mined, not only because of the coal's comparatively close proximity to the surface but also because of the situation of the deposits in a manner that favors their easy working. It is only Upper Silesia's unfavorable geographical location in the extreme southeastern corner of the realm that has retarded, to some extent, a more thorough and complete utilization and devolopment of its treasures.

In the region just referred to, the productive coal formations occupy a considerable area. Southwards they extend into the valley of the Olsa, a tributary of the Oder already mentioned above. Eastward they are continued far beyond the region of the Vistula thus coming in direct contact with the Sudetic beds and with the younger formations of the Carpathians, the former of which make their appearance again to the westward as the underlying beds of the ore-bearing Carbon, the latter formations (i. e. the Carpathian) overlapping the former in the South as a result of important earth movements which have caused a reversal in the regular order and have brought the chalk formations to rest upon those of Tertiary.

To the northward lie in regular order the formations of the Triassic Period beginning with the Red Sandstone. The Dolomite formations of the lower Limestone ridge (Muschelkalk) are the site of rich lead and zinc deposits and the Trias limestone of this region serves many useful purposes aside from being a great metal producer. From the nature of it, it forms hilly ground, for it is not easily weathered away, the reason being that limestone is usually well jointed, so that when rain falls upon it, it is quickly drained off down the joints and disappears under ground. In this way a complicated network of underground streams is created in the interior of the mountain or elevation. This process is facilitated by the ease with which water dissolves limestone. The streams run through cave after cave until they issue lower down the elevation. And so here in Upper Silesia, the fortunate fact of the existence of the limestone ridge together with its favorable situation, makes it possible to provide for all the water requirements of the entire industrial district from this easily tapped source.

Beyond the limestone region are to be found the geologically younger brown iron-ore deposits. Here, likewise, the Keuper and Jurassic formations, found in the region of the Upper Silesian flat lands and among the forests in the valleys of the River Stober and the River Malapane as well as in the neighboring Russian-Polish territory, carry clay ironstone.

The same formations in West Galicia, however, contain only fire-proof clays but no useful ores. The chalk formations of the Upper Silesian plains are of subordinate importance. Much more important are the rich deposits of the Miocene sea left over from the Tertiary Period. They cover practically this whole region, and have filled up all the gaps, interstices and unevenness of ground that existed prior to their laying down. Besides their gypsum and sulphur ore deposits, these beds are likewise the source of Upper Silesia's numerous mineral springs, and the site of its extensive and highly developed rock-salt supplies, which make their appearance at an inconsiderable depth below the surface in the neighborhood of Sohrau and Rybnik. Still younger beds (Upper-Miocene) carry clay ironstone and brown coal, and in some places brown iron ore. The more recent deposits of the Diluvial Age are unevenly divided. It is only in the valleys that these deposits appear in completer form as deposits of one important and two subordinate movements of the Ice Age.

CHAPTER THREE

THE UPPER SILESIAN COAL FIELDS

In the consideration of the problem we are discussing, we have to deal not only with the Upper Silesian coalfields which belong to Germany, but likewise, in certain respects, with the Russian-Polish, the Galician, the Austro-Silesian and the Moravian districts which lie east, south, and southwest of the Upper Silesian country in almost a complete half-circle. In all of these districts coal-mining operations are being conducted, and while none of them possesses quite such rich stores of coal as Upper Silesia, they are, particularly Poland, richer in the possession of other valuable minerals. For, whereas Upper Silesia's store of iron ore is practically exhausted, Poland possesses fields whose estimated reserves run as high as 600,000,000 tons. Moreover, if we take into consideration that Poland will fall heir not only to the coalfields of the former Russian-Poland but likewise to the Galician coalfields, we find that the ratio of coal supply runs, according to the statistician Michael, as follows:

German (Upper Silesian)	48.6	per cent
Polish	51.4	„ „
	100.00	per cent.

The principal industrial district of Upper Silesia includes a northerly region in which are to be found Gleiwitz, Hindenburg (Zabrze), Mikultschütz, Beuthen, Laurahütte, Rosdzin, Myslowitz, Kattowitz, Emanuellsseggen, Schwientochlowitz, Ruda, Bielschowitz and Makoschau. Southwards lies another district in the neighborhood of Knurow and Czerwionka and stretches out easterly in the direction of Orzesche and beyond Nicolai. To the westward, again, lies the Rybnik district confined to the following places, viz., Niedobschütz, Niewiadom, Czernitz, Rydultau, Pschow and Radlin. On the upper Oder, near Hultschin, lies still another albeit less important coal-mining district. Altogether the productive coal bearing region of Upper Silesia comprises a total area of 2800 square kilometres (1077 sq. miles).

Among the great German coalfields, those of Upper Silesia stand second to those of the Rhenish-Westphalian (Ruhr) district so far as supply and development are concerned. On the other hand, with respect to the thickness of the coal seams, and the number and capacity of the individual coal beds, Upper Silesia's coalfields stand second to none.

Numerous borings with diamond-drills, conducted systematically and subject to continuous examination by geological experts have established the presence of successive layers of coal with all accompanying details of interest to the mine operator. At Paruschowitz near Rybnik two borings of a depth of

6500 feet beginning at a depth of 675 feet, traverseed 83 coal seams, which in the aggregate possessed a thickness of 283 feet. At Czuchow there was carried out what is claimed to be the deepest boring in the world, viz., 7275 feet which, beginning at a depth of 374 feet, traversed 163 coal seams.

The following borings, respectively, attained a depth of more than 3900 feet:—Althammer, Knurow, Boidol, Czuchow III, Czerwionka, Chwallowitz, Timmendorf, Mainka, Smilowitz, Adolf Wilhelm.

Further individuality is possessed by the Upper Silesian coalfields by reason of the quality and coal-bearing capacity of the so-called *Saddle* coal beds, so characterized because of their arch-shaped bend. They make their appearance in the main mining district where six of the Saddle seams are coal-producing to a depth of 88 feet, and 90 per cent of the beds is solid coal entirely free from shales, slates or other refuse. These *Saddle* seams are found principally in an ore-bearing vein, $4^1/_2$ to $7^1/_2$ miles broad and running from West to East. Besides being, from their nature and position, beds that are easily workable, they possess the further advantage that they are interspersed at intervals by a number of dome-shaped formations that bring them very close to the earth's surface.

As regards the extent of the coal supply in the Upper Silesian coalfields, careful and scientifically

made estimates establish that, taking account only of coal beds not less than 30 centimetres (11.8 inches) in thickness, the coal reserves amount to 166,000 million tons. Of this amount 68 per cent or 113,000 million tons are estimated to be workable,* and 60,000 million tons of the latter are found less than 1000 metres (3280.8 feet) below the surface. From a depth of 1000 metres to 1200 metres (3937 feet) there are 14,460 million tons of workable coal, and from 1200 metres to 1500 metres (4921 feet) 15,567 million tons, and finally from 1500 metres to 2000 metres (6561.6 feet) 23,603 million tons. In the aggregate therefore 113,995 million tons of workable coal. The present production, if it reaches the pre-war standard of 50,000,000 tons per annum, would not exhaust the reserves contained within the first 1000 metres of depth before 1200 years. If production mounts to 75,000,000 tons per annum, the aforementioned reserves will be good for 800 years. Of course if the coal can be worked also at the lower levels, the duration of the supply will be correspondingly increased.

In this connection, it is interesting to note that in the German estimates of their coal supplies two kinds of coal are distinguished, viz., the caking and the non-caking coals. This is equivalent to a distinction between coals which are fit for coking

* According to leading experts, coal below the 1200 metre level are workable, but not *practically* workable. See chapter VIII *post*.

purposes and those which are not, for the best coking coals are strongly caking, whereas the best steam-coals (semi-bituminous and anthracites) are non-caking. Coals which are sometimes classified as super-bituminous, used chiefiy in reverbatory furnaces, are likewise non-caking, whereas bituminous coal having somewhat similar properties and employed chiefly in gas-making is, like the best coking coal, also caking. The value of bearing these distinctious in mind will become apparent when we come to examine the importance of the coke industry, coke being indispensable in the smelting of iron in blast furnaces. Such coke is produced by carbonising, at high temperatures and in large ovens, coals specially selected for their strongly caking properties and their relatively low ash contents.

Now we find upon an examination of the German estimates of their coal supplies that relatively a small percentage of the total supplies of workable coal is caking coal, applicable to the purposes above mentioned. Thus of the 60,000 million tons of easily workable coal, only 7,000 million are caking coals, and similarly only 16,300 million tons, out of the grand total of 113,995 millions, are caking. It is difficult to draw any correct conclusions from these facts, for whereas the coke-oven industry in Upper Silesia and throughout Germany is one of growing importance, much depends upon the question of how Germany is to make up to herself for the loss of

75 per cent of her iron supplies through the cession of Lorraine to France.

If we glance once more at the figures we have furnished above of the available coal reserves, we find that 74,460 million tons lie within 4000 feet of the surface. In Great Britain, two Royal Commissions appointed to investigate the duration of British coal reserves, adopted 4000 feet as the maximum limit of practicable working, for the reason that in Great Britain the temperature at 50 feet below the surface is constant throughout the year at 50° F. and then it increases 1° F. for every 60 feet lower in depth, and accordingly at 4000 feet a temperature of 116° F. is to be expected. It is noteworthy also that the two Commissions adopted one foot as the minimum workable thickness of seam.

If now we compare the estimates of the two Royal Commissions as to the amount of British coal reserves with the German estimate of 74,460 million tons for the Upper Silesian coalfields, we shall have a fairly good idea of the comparative productive value of the two areas.

Besides the estimates of the Royal Commissions, two other more recent estimates have been made, one by Dr. Strahan, the Director of the Geological Survey of England and Wales whose revised estimate appears in the Report of the International Geological Congress for 1913, the other by Professor H. Stanley Jevons, in his book on *The British Coal Trade*.

These various estimates are as follows:—

		Million Tons within 4000 feet
First Royal Commission	1871 . .	146,480
Second Royal Commission	1905 . .	141,635
Dr. A. Strahan	1912 . .	178,727
Prof. H. S. Jevons	1915 . .	197,000

From these figures it appears, therefore, that the entire British coal reserves within 4000 feet of the surface may be said to be from two to two and a half times as great as those of the Upper Silesian coalfields, but it is interesting on the other hand to observe that whereas the British coalfields comprise an area of over 11,900 square miles, the Upper Silesian coalfields are comprised within an area of only 1077 square miles or one eleventh of the former in extent.

Comparing now the coal production of the three great coal producing countries of the world, before the war, we find the following quinquennial averages for the United States, Great Britain and Germany, 1900—1914.

	Millions of Tons per annum		
	United States	Great Britain	Germany
1900—1904 .	288,2	226,8	112,5
1905—1909 .	400,5	256,0	139,8
1910—1914 .	519,2	269,9	168,7
Per cent of Compound Interest Increase	6,0	2,0	4,0

In 1915 the total coal raised in the United States was 534 million tons. In 1917 it was about 641 million and in 1918 about 700 million tons. Reliable figures are not at hand but there seems to be no appreciable moderation in the increasing output of the States.

In Upper Silesia, distinct from the other German coalfields, the output has increased from year to year at about the same pace as that shown for Germany as a whole, namely at the rate of 4 per cent compound interest. Now if we assume that the same rate of increase will persist in Germany and in Upper Silesia for twenty years after 1914, then Germany's production in 1934 will have mounted to 420 million tons per annum and Upper Silesia's to 95 million tons. Had the war not interrupted and in part destroyed the normal economic processes of our era of peace, it is fair to assume that the foregoing figures would in fact be reached by 1934. Indeed, with the ever growing demands upon the coal supplies of the world, the problem which has to be solved and solved quickly is how production can once more be restored to the pre-war level, and in the solution of this problem Germany must play a part second to none when we consider that over 83 per cent of the world's output of coal before the war came from the three countries—the United States, Great Britain and Germany. That Germany's part was to be an ever-increasing one is apparent when we consider that whereas Britain's

output was growing at only 2 per cent compound interest per annum, Germany's output was growing at double that rate, so that in twenty years' time Germany's total output would have balanced Britain's.

We have grown so used to the startling changes of the past fifty years, during which the production of all kinds of raw materials has reached proportions never before heard or even dreamed of, that we fail to take count of the fact that this growth never ceases and that timely provision must be made for the orderly development which we desire to have take place during the *next* fifty years. Thus, it is scarcely more than fifty years ago when the world's total output of coal was only 130 million tons of which no less than 80 million tons or practically 60 per cent were raised in Great Britain. The then known immense coal reserves of North America as well as those of the present States of Germany, had scarcely been touched, chiefly because neither of these countries had as yet reached a state of industrial or economic development at all comparable with that of Great Britain. Moreover, Britain's economic advantage at that time was a unique one, owing chiefly to the proximity of all her principal coalfields either to the sea, on the one hand, or to supplies of ironstone, on the other. The German coalfields, particularly the Upper Silesian, do not to-day possess these advantages. Upper Silesia's situation, in so far as serving world markets by sea is

concerned, is an especially unfavorable one. The nearest sea-port, Stettin, is more than 300 miles distant from the industrial district. The North Sea ports, Hamburg and Bremen, whose overseas trade has been of first rank importance, are more than 500 miles distant from Upper Silesia, whereas the Rhenish-Westphalian fields are less than two hundred miles distant and have, moreover, the advantage of even nearer proximity to the great ports of Rotterdam and Antwerp. It is apparent, therefore, that the extraordinary advantages possessed by England, France and Belgium for reaching world markets are entirely absent in the case of Upper Silesia which is entirely cut off from any overseas trade and must depend on other factors, viz., the favorable development of a market in Eastern Germany and in the neighboring countries including the Balkan lands, whose coal requirements can not otherwise be met and to whom access is easily attained by way of the Danube and its tributaries.

Nor are the difficulties which Upper Silesia's industries have to combat in winning their own home markets, light ones to contend against. Geographically, lying in a pocket between the former empires of Russia and Austria, its products must travel about 120 miles before reaching the first real market of any importance, viz., Breslau. Nowhere else in the world can a great industrial district be found that possesses so little market for its products

within so wide a periphery. The result is that in competition with other industrial districts of the home land, Upper Silesia works at a distinct disadvantage. There is firstly the competition of the Lower Silesian coalfields which, although comparatively unimportant, nevertheless supply about six million tons to Middle and Lower Silesia, and exteriorly, considerable supplies to Brandenburg and Berlin, to Saxony and even to Posen and the Baltic regions. Secondly, Upper Silesian industry has to contend with mining production of near-by Saxony, amounting in 1911 to five and a half million tons, nearly sufficient for Saxony's own requirements. Most important of all is the competition with the Rhenish-Westphalian (Ruhr) mining district whose proximity to the entire region west of the Elbe including Sleswig-Holstein, most of Mecklenburg, and even parts of Brandenburg, give it the advantage over Upper Silesia. Berlin is about equi-distant from the Ruhr and the Upper Silesian districts. In 1911 the Ruhr district shipped to the Kingdom of Saxony 111,000 tons; to the province of Saxony 1,656,000 tons; to Berlin and suburbs 415,000 tons; to the rest of Brandenburg 135,000 tons; to the grand duchies of Mecklenburg 367,000 tons.

Upper Silesia suffers further from the competition of the brown coal industry, a lesser part of which in Bohemia and the greater part in the German brown coal district, particularly the Niederlausitz

district, supplied the following amounts of brown coals and brown coal brikets in 1911, namely, Silesia 877,000 tons; Posen 144,000 tons; Brandenburg 2,470,000 tons; Berlin and Suburbs 2,052,000 tons; Province of Saxony, Thuringia and Anhalt 9,452,000 tons, the grand duchies of Mecklenburg 268,000 tons; the province of Pommerania 516,000 tons; West Prussia 62,000 tons and East Prussia 23,000 tons. Thus, as these figures establish, the Upper Silesian mining industry has to reckon likewise with the brown coal industry as a formidable competitor.

From the north and northwest comes now another competitor, scarcely less formidable than the former—British coals. In 1911 Britain shipped 4,000,000 tons of coal into the regions east of the Elbe. The requirements of the Baltic sea-ports are for the most part supplied by British shippers of coal. Berlin and suburbs purchased 1,412,000 tons of British coal in 1911, only 217,000 tons less than the amount purchased in Upper Silesia.

In spite of the competition we have noted, closing in from every side, Upper Silesia has succeeded in supplying the coal requirements of Eastern Germany to a notable extent and as follows: Upper Silesia—all; the government districts of Breslau and Liegnitz—more than half; province of Posen—nearly all; Brandenburg including Berlin—about one third; the provinces of Pommerania, East and West Prussia—about one half.

CHAPTER FOUR

UPPER SILESIAN COAL. THE COKE INDUSTRY

Although coal is the principal source of all artificial light, heat and power, its proper utilization involves not only greater efficiency in respect of power production and of heating operations, but it includes a suitable handling by the chemist, for when coal is scientifically treated, it yields a whole series of valuable by-products which form the raw materials of important chemical industries, and the problem of "coal economy" involves the whole question of the recovery of such by-products.

It is a significant fact that the four fundamental minerals which are required in great quantities for the maintenance of the chemical industries are all present in the Upper Silesian mining district. These are salt, limestone, coal, sulphur. An extraordinary array of substances may be manufactured from these four minerals. There is hardly an article in common everyday use which could exist if one or the other of these chemical substances were not employed in its manufacture.

Thus, from the tars resulting from the distillation of coal in gas works, and from the manufacture of

metallurgical coke, are obtained ammonium salts, a whole series of aromatic hydro-carbons (benzene, toluene, anthracene, naphthalene etc.) and other products, which form the basis of the manufacture of synthetic dyes and drugs, as well as that of high explosives, and the recovery of such products is essential to the establishment of industries manufacturing such synthetic chemicals.

With regard to ammonium salts, which are chiefly valuable as fertilizers for the production of foodstuffs, Germany produced 500,000 tons in 1913, whereas Britain, with a coal output 50 per cent higher, produced only 369,557 tons derived from coal. Upper Silesia's share in the German production was about 35,000 tons.

In the consideration of the question of the quality of Upper Silesian coal, upon which attention will soon be fixed, we have to bear in mind that while the coal substance is always compounded of the same elements, namely, carbon, hydrogen, oxygen, nitrogen and sulphur, these elements are not always present in the same degree or in the same proportions. It is to this fact that we are indebted for our various grades and qualities of coal.

Now it will have been understood from what has been said in a previous chapter on the origin of coal, that inasmuch as coalfields have been formed from vegetable *débris* in nearly all the great geological epochs, the present-day coals represent

widely different intermediate stages in the transformation process that goes on between the wood stage and the hard coal stage of the product.

Such stages would include (1) *Peat,* which may be regarded as the initial stage in the transformation process and, geologically speaking of very recent origin; (2) the "sub-bituminous" *Brown Coal* and *Lignites* which are principally Tertiary coals and therefore intermediate between peat and the true coals. They are widely distributed over the Central European plain, the Southern States of North America (Texas, Arkansas, Louisiana). They are likewise of Cretaceous origin, found over a large area in the United States (North Dakota, Montana, Wyoming) as well as in Canada. Large deposits are also found in Australia and the Malay peninsula. They may be sub-divided into (a) woody or fibrous brown coals of ligneous structure (b) earthy brown coals devoid of organic matter and readily crumbling under pressure (c) common lignites, of a dark brown color (d) bituminous lignites, which are black in color and have a shell-like fracture. In Germany 87 million tons, were raised for home consumption in 1913 and in Austria-Hungary 27.4 million tons. In other countries their economic value has not been nearly so fully appreciated. In Germany and Austria lignites have been largely used for firing boilers, for the heating of evaporating pans, and also, in the case of some of the better qualities, to

a limited extent for metallurgical purposes. Moreover, upon distillation they yield a variety of valuable decomposition products, including petrols, kerosene, fuel and lubricating oils, solid paraffins, pitch, and ammonium sulphate. (3) The great class of *Bituminous Coals*, which are mainly of Carboniferous or Permo-Carboniferous origin. The Regnault-Grüner classification of bituminous coals, adopted by Britain's greatest coal expert, Professor William A. Bone, is as follows: — (a) Super-bituminous coals, which burn with a very long and highly luminous "smoky" flame, and are chiefly used for the firing of reverberatory furnaces. They are also used to some extent as house coals. They are however not good for steam raising nor, on account of their non-caking character, for coke manufacture. (b) Gas coals which comprise all the best gas producing coals and a porous coke of moderate strength. They burn with a long luminous flame and on distillation become highly swollen during which gas is freely expelled. (c) Hard coking coals, yielding a very dense and hard coke. They are chiefly valued for the manufacture of metallurgical coke, but they are not suitable for steam raising. (d) Semi-bituminous, which are good steam coals, only feebly caking and burn well in a good draft with a short smokeless flame. Particularly good for stoking ship furnaces. (4) Anthracites, which furnish the best steam raising coal and are much appreciated for use in domestic

heating owing to their cleanliness and smokeless combustion. They are non-caking and burn with a short non-luminous flame. The total quantity of anthracite raised in Great Britain in the year 1913 was 5,194,620 tons of which 4,833,159 came from South Wales; nearly three million tons were exported, chiefly to France, Italy, Germany, Sweden and Holland. Only the United States, Great Britain and China possess great deposits of anthracite. Pennsylvania anthracite underlies 500 square miles of territory and in China, a German geologist reports that the province of Shansi in the valley of the Hoang-Ho, west of Pekin, contains a single deposit of 18,000 square miles of coal like Pennsylvania anthracite, lying in thick seams, level and undisturbed, and outcropping on hillsides so that trains can run right into them.

Now the peculiar qualities of Upper Silesian coal, as determined in part by ordinary usage and in part by experiment, are cleanliness, hardness, inflammability, good steam-producing powers, high heating values, great productivity of gas, economy of attention in firing. The last named quality requires special mention. It is due to the favorable content of oxygen in the coal, as a result of which the Upper Silesian coal is consumed, without requiring special attention or care, down to the last ash, and despite bad furnace draughts it is consumed without leaving behind any unburned residue. It burns with a long

flame which spreads over the surface to be heated thus greatly adding to its natural heating powers. Whatever fuel apparatus is employed, even some of the poorest installations, the coal manages to secure the desired effect. It has, moreover, a low ash content.

These qualities have always assured for Upper Silesian coal a ready market wherever it has been tried, whether for domestic, industrial or commercial purposes.

As has already been pointed out in a previous chapter, Upper Silesian coals are for the most part non-caking. Fully seven-eighths of the coal is of this character, and is likewise very rich in gas, its content of hydrogen being five per cent and of oxygen ten to twenty per cent. Good caking coal, on the other hand, should not contain more than five per cent of hydrogen and ten per cent of oxygen, the effect of too much gas being to prevent caking, the constant action of the escaping gas preventing an amalgamation of the carbon content in the coal. These facts must of course greatly affect the development of the iron industry in Upper Silesia, as one of its essential requirements is a good supply of coal for the manufacture of metallurgical coke and without which the blast furnaces employed in the smelting of iron would be unable to operate. But while the supply of good coking coal in Upper Silesia is not to be compared with that in the other

principal German coalfields of the Ruhr district, still there is probably a sufficient supply to answer all moderate demands of the industry in Upper Silesia. It is possible, too, that greater supplies of coking coal will be available in the future by reason of the recent discovery that the caking qualities of the coal improve at the greater mining depths. Moreover the big coke-oven works of Upper Silesia have introduced a system of crushing and stamping the coal by heavy machinery, which has likewise been found to add to its caking qualities.

In any event the coking industry has been established upon such a sound basis in Upper Silesia, as in all Germany, that it is not possible to believe that it is going to suffer any serious set-backs, so long at least as it remains in German hands. Indeed, with a view to the fact that the coking industry is not understood in all its bearings, a brief account of it may not prove uninteresting.

As has been stated, for the making of iron it is necessary to use coke. This fuel is made by heating coal in closed retorts where the gas is driven off and the carbonised coal is left in big lumps that are harder than the coal itself was and therefore are able to hold up the burden of the ore so that the fire in the blast furnace does not smother. The most essential qualities needed in a good blast-furnace coke, apart from low ash-content, are a peculiar combination of strength and porosity, so that the

fuel, whilst capable of withstanding the weight of superincumbent materials in the furnace, shall nevertheless be sufficiently porous to be both easily penetrated by the ascending furnace gases, and rapidly consumed by the blast at the level where the air-blast enters the furnace. It is also important that it shall be as hard and resistant as possible to the solvent action of the oxides of carbon in the furnace gases in the upper regions of the furnace.

Until the year 1880, or thereabouts, practically the whole of the metallurgical coke required in the world was manufactured in what are known as bee-hive ovens, without any attempt being made to recover any of the valuable by-products obtainable when coal is carbonised at high temperatures. With the old fashioned bee-hive oven, sometimes as much as 10000 cubic feet of gas per ton of coal would be entirely lost which now are saved by an improved by-product oven.

It seems curious that, with the expansion of the gas industry, and the spread of technical science during the latter part of the nineteenth century, a method so obviously wasteful should have been tolerated so long, but "beehive" coke was in every way so thoroughly satisfactory as a blast-furnace fuel, and the ironmaster was so accustomed to its virtues, that he came to regard it with peculiar affection, and thought that no other kind of coke would suit his purpose so well. Actual experience,

however, has now proved this prejudice to have been quite unfounded.

Belgium took the lead in the invention and application of the modern by-product oven, but the idea was quickly taken up by the Germans who devoted a great deal of study and science to the subject and, during the years 1880-1885, a number of systems, partly of Belgian, partly of German origin, were introduced with the result that the practise of coking coal in the new types of rectangular ovens, with some form of heat recuperation, and of recovering condensable by-products and ammonia from the gas before it was burnt in the oven flues, rapidly extended and developed in Germany, Belgium and France, and soon became almost universal there.

The new methods were, however, very slowly adopted both in Great Britain and in America, and until very recent years no great headway was made with installations either in Great Britain or in America. At the end of 1900 there were in the United States as a whole only 1085 by-product ovens, the output of by-product coke in that year being no more than 1,075,727 tons out of a total production of 20,533,348 tons, in spite of the large profits gained out of by-product recovery. In Germany, on the other hand, the proportion of coal coked in by-product ovens was 30 per cent in 1900 and 82 per cent in 1909; in England 10 per cent in 1900 and 18 per cent in 1909. In the United States the proportion of

by-product coke has now grown to about 80 per cent* of the total coal coked. In Great Britain the amount of metallurgical coke manufactured in 1916 was 13.42 million tons, to obtain which over 20 million tons of coal were carbonised, and the rapid progress made since 1909, when the proportion of coal coked in by-product ovens was only 18 per cent of the total, is shown by the fact that in 1916, 70 per cent of the coal coked was coked in by-product ovens, and from all appearances the old beehive ovens will soon entirely disappear in the United Kingdom.

How far Great Britain lagged behind Germany in the production of ammonium sulphate in coke ovens during the first decade of the century will be apparent from the following figures: —

Ammonium Sulphate (in 1000 tons) obtained by carbonising coal in coke ovens

	Gt. Britain	Germany
1900	10	80
1903	18	111
1906	44	200
1909	75	278

It is to be observed, in explanation of the various uses to which the by-products may be put, that in the manufacture of the coke, the purification of the gas from the by-product oven gives several pounds

* It is reported that at the end of 1915 there were in the United States 6268 by-product ovens already built and 1191 more in course of construction.

of crystallized ammonia and several gallons of tar per ton of coal. The ammonia is a valuable fertilizer, the tar is used for roofs and roads besides furnishing a host of chemicals and dyes. How valuable these by-products are may be judged from the following figures:—In 1908 the German coke ovens produced approximately 22,000,000 tons of coke from 30,000,000 tons of coal, and as by-products 630,000 tons of tar worth £600,000; 60,000 tons of ammonia worth £2,600,000; and 60,000 tons of benzol worth £400,000.

In addition to these uses it is found that the extraction of all these products from the gas carried off from the coke ovens does not exhaust the calorific or heating value of the gas beyond 5 to 10 per cent, and that this gas, after it has been freed from its ammonium chloride and tar, its ammonia, naphthalene and benzol, may still be utilized for power, lighting and heating purposes. Indeed, coke-oven gas, after purification, is already extensively used both in Germany and in America as a public supply for domestic consumption. In Germany a large number of towns in Rhineland and Westphalia are supplied with purified gas from the neighboring coke ovens at prices which are said to be less than 9*d.* per 1000 cubic feet. Also in the United States, the city of Boston, to mention one centre of population only, has since 1901 been supplied with purified gas from a battery of 100

Otto-Hofmann coke-ovens installed at Everett, Mass., and owned by the Dominion Iron and Steel Company. The average yield of gas from these ovens is 10,390 cubic feet per ton, of which 5143 cubic feet are available for supplying the city of Boston.

CHAPTER FIVE

GERMANY'S COAL PROBLEM

Now that we have examined some of the more important characteristics of the Upper Silesian coal mining district we may turn our attention to some general features of Germany's coal problem taken as a whole.

Perhaps we can best indicate the seriousness of depriving Germany of any part of her coal supply by comparing the figures for the amount of coal used for various purposes in the three countries which in 1913 produced more than 83 per cent of the world's coal, namely, the United States, Great Britain and Germany. For the purposes of the following comparison ne have employed the statistics for the year 1913 in the cases of Great Britain and Germany, and the year 1915 for the United States, there being no ulterior reason for the use of the figures in these particular years excepting their availibility to the author.

THE UNITED STATES

Purposes	Million Tons	Per cent
1. Coke ovens and gas works . .	67,0	12,6
2. Mines, public electricity works, agriculture, factories, and other industrial establishments . . .	186,0	34,8
3. Transport	139,0	26,0
4. Domestic consumption	118,0	22,1
5. Export	24,0	4,5
Total . . .	534,0	100,0

GREAT BRITAIN

Purposes	Million Tons	Per cent
1. Coke ovens and gas works . .	50,0	17,4
2. Mines, public electricity works, agriculture, factories, and other industrial establishments . . .	86,0	30,0
3. Transport	17,0	6,0
4. Domestic consumption	36,0	12,5
5. Export and bunker coal to foreign going vessels	98,0	34,1
Total . . .	287,0	100,0

GERMANY

Purposes	Million Tons	Per cent
1. Coke ovens and gas works . .	54,0	28,7
2. Mines, public electricity works, agriculture, factories, and other industrial establishments . . .	64,5	34,5
3. Transport	27,5	14,6
4. Domestic consumption	17,0	9,1
5. Export	24,0	13,1
Total . . .	187,0	100,0

Comparing these figures it will be seen that in Germany a much larger percentage of coal is carbonised with by-product recovery in gas works and coking plants than in Britain or the United States. That Germany employs 28,7 per cent of her coal for such purposes as against only 17,4 per cent in the United States is entirely due to the much greater development of the by-product coking industry in Germany than in the other two countries. But when we compare the actual amounts of coal utilized for such purposes, namely, 67 million tons in the United States, 54 million tons in Germany, and 50 million tons in Great Britain, the disproportions do not seem so great when we consider that the industrial development of the three countries stands upon an approximately even level, and if we consider that the industrial development of the United States is to a very preponderating extent confined to the region east of the Mississippi River, then the disproportion in the percentages as between Germany and the United States loses a great part of its importance. It is furthermore to be noted that whereas in Germany the development of the coking industry was earlier and had already practically reached the limit of its possible growth before the war, in Great Britain and the United States by far the greatest development of this industry has been undertaken since the beginning of the war and today the carbonisation of coal in these two countries would

disclose a much higher figure than in the tables above set forth.

Coming now to the second item in the foregoing tables, namely, the percentage of coal devoted to industry in the factories, mines and agriculture, we discover a striking similarity in the figures, the percentage of the United States being 34.8, of Germany 34.5 and of Great Britain 30. But these figures prove that in Germany the greatest economy is employed in the consumption of coal, for if we assume a comparatively equal development of the industries of the three countries, then Germany, with a population two-thirds as large as that of the United States, consumed for the purposes aforesaid only about one-third as much coal (U. S. 186 millions, Germany 64.5 millions). And, on the other hand, Great Britain with a population only two-thirds as large as Germany's consumed exactly one third more coal for the purposes mentioned (G. B. 86 millions, Germany 64.5 millions).

When we come to the third item in the tables, namely, transport, it is obvious that to compare the consumption of the three countries on a pencentage basis would be unfair and of no value, for it is manifest that in the consumption of coal for transport purposes, the area of a country and, to a certain extent, its shape and contour play a great part, as well as the density of its population per square mile of territory. Now it must be apparent

that taking all the leading factors into consideration, namely, area, shape and contour of the countries and density of population per square mile of area* Germany and Great Britain are much more fairly to be compared with each other than is either of them with the United States whose area is 14½ times as Great as Germany's and 24½ times as great as Great Britain's. Accordingly, we find that Germany with an area 67 per cent larger than Great Britain's consumed 60 per cent more coal for transportation purposes (G. B. 17 millions, Germany 27,5 millions). Thus here again we perceive that Germany has been economical in the consumption of her fuel.

As regards the fourth item, namely, domestic consumption the showing is very distinctly in Germany's favor, for, whereas Germany consumed 17 million tons for domestic purposes (9.1 per cent of the output); Great Britain consumed 36 million tons (12.5 per cent of the output); the United States consumed 118 million tons (22.1 per cent of the output).

Finally, we arrive at the last item, namely, coal for export, and here again Germany cuts a very modest figure, her exports being but a fourth part of Great Britain's (G. B. 98 million tons, Germany 24 millions) Comparison with the United States, in this regard, has no value as the United States

* Density of population per square mile in the U. S. 35, in Germany 310, and in Great Britain 376.

has only recently become a large exporter of coal.

Let us now examine the foregoing figures in the light of the terms of the Treaty of Versailles, and what do we find? We find that with the loss of Upper Silesia (a possibility that has to be reckoned with under the Treaty) and the Saar basin the coal supplies of Germany are diminished by one-third. That is to say that taking the production of 1913 as a basis, Germany would have approximately 62 million tons less to work with. There would remain, after this deduction, 125 million tons.

Now if the Peace Treaty were to remain unmodified, Germany would stand to lose the following additional amounts from what remains to her, namely, 20 million tons to France as compensation for damage done to French mines (Parag. 2 of Annex V of the Reparation Chapter), and for a period of ten years. Secondly, 25,000,000 tons to France, Belgium, Italy and Luxemburg. This latter amount is imposed despite the provision already made for compensation to France by the cession of the Saar basin and by the provision as compensation for damage done to the French mines. With these deductions, there still remain 80 million tons as against a pre-war consumption of 163 million tons (deducting the exports from the total output).

Thus far we have made our calculations without allowing anything for reduction of output due to the altered conditions in the mining industry since

the war. Formerly the daily shift was 8½ hours, to-day it is nominally 7 hours but as allowances are made for time which the miner loses in reaching his work and for other deductions from the actual working time of the miner, the actual average time devoted by the miners to the real work of mining is much less than 7 hours a day and in some of the mines it does not exceed 4½ to 5 hours per day. Thus if we leave all the other unfavorable factors, which exist at present in the German mining industry, entirely out of consideration (such as the shortage of housing, the impaired physical efficiency of the men due to the horrible food conditions since the year 1916, the diminution in the number of skilled miners because of war casualties and the need for much rehabilitation in the mining plants which war and post-war conditions have hitherto made impossible) we shall find that we shall have to reckon with a shortage of output as compared with the year 1913 amounting to at least 30 per cent. As an offset to this we have, however, to reckon the loss of territory suffered by Germany if the amputations referred to are carried out and assuming the loss of Prussian Poland and of Alsace-Lorraine to be permanent. With such loss of territory there must be some loss in demand and this is estimated by Mr. Keynes in *The Economic Consequences of the Peace* at 29,000,000 tons. Accordingly, if we assume that Germany's reduced

consumption of coal due to loss of territory stands as an offset to reduced output we find that Germany's needs for her home requirements will be 134 million tons instead of 163 million tons as required in 1913 and that deducting 29 million tons from the 80,000,000 tons which, as we saw, would still be left after deductions, there remain only 51,000,000 tons for Germany's own use.

These results may, perhaps, best be seen if we place them in adjacent columns as follows.

Amount of Coal Germany will have

	Tons
1. Pre-war production	187,000,000
2. Deduct for loss of Alsace-Lorraine, Saar and Upper Silesia	62,000,000
Balance	125,000,000
3. Deduct compensations	45,000,000
Balance	80,000,000
4. Deduct reduced production	29,000,000
Balance	51,000,000

Amount of Coal Germany needs

	Tons
1. Pre-war production	187,000,000
2. Deduct Exports	24,000,000
Balance	163,000,000
3. Deduct for decreased demand due to loss of territory	29,000,000
Balance	134,000,000

Now let us assume, as Mr. Keynes says, that Germany cannot and will not furnish the Allies with a contribution of 40,000,000 or 45,000,000 tons annually. Let us assume that the Allies cut Germany's obligations down to 20,000,000 tons, as they have a right to do under Part VIII. Annex V parag. 10 of the Treaty. Under these conditions Germany will then have for her own consumption 76,000,000 tons instead of 51,000,000 tons.

76,000,000 tons for a nation two-thirds the size of the United States which is now consuming ten times 76,000,000! 76,000,000 tons for a nation one third larger than the United Kingdom which is consuming from three to four times 76,000,000! We do not propose to insult the reader's intelligence by arguing the question of whether this is a situation possible to endure. What other alternative is there then if we are to assume that the Allied Governments do not wish a state of chaos to emerge in central Europe by enforcing conditions which would stop the wheels of industry of the greatest industrial nation on the Continent of Europe? The only other alternative is for the Allied Governments to keep their hands off Upper Silesia, and permit no interference on the part of Poland with the natural, historical, political and economic relationship of that country with Germany. That is the solution of Germany's coal problem and the only possible solution thereof.

If Germany retains Upper Silesia, she will be able to pull through her troubles, although with great difficulty and after the expenditure of many years of hard and devoted exertion. If Germany is deprived of Upper Silesia, she will be like one stricken with paralysis in every limb, her factory fires will be extinguished, no smoke will be seen curling from the chimneys in her industrial towns and the grass will be growing in the once busy streets which formerly teemed with interminable traffic. The hungry millions of thrifty workers will be ripe for rum, riot and rebellion, and in this dangerous mood they will infect and poison the entire social life and civilization of Europe and eventually of the world-at-large. This is but the naked picture as it presents itself to an unprophetic eye, but the reality will exceed in its awfulness anything that we can conceive and in the extent of the desolation that will be wrought surpass all powers of the human imagination.

CHAPTER SIX

THE IMPORTANCE OF COAL TO GERMANY AND TO THE WORLD

The districts lost to Germany under the terms of the Peace Treaty, such as Alsace-Lorraine and Posen, together with those districts which under the terms of the Treaty she might be deprived of after a plebescite, such as Upper Silesia, and the districts of East and West Prussia which the Allies, at one time (prior to the recent plebescite) regarded as debatable ground over which the Poles might some day be allowed to rule, contain 9,000,000 inhabitants or about 14 per cent of the population. That loss would reduce Germany's inhabitants from 65,000,000 to 56,000,000 people. As producers these 9,000,000 people represent a large part of Germany's wealth, and of the total number in question, approximately three-quarters claim German as their mother tongue. "In spite of all claims to the contrary, official statistics conclusively demonstrate, that in the much contested Alsace-Lorraine region there were in 1910, 1,634,260 German-speak-

ing inhabitants out of a total of 1,874,014," thus writes the eminent British economist J. Ellis Barker (*Economic Statesmanship*, page 276). According to Mr. Barker, in 1910, at the time of the census, only 204,262 of the inhabitants of Alsace-Lorraine, or less than one-ninth, had the French-mother tongue, and only 99,612 people or one-nineteenth of the inhabitants spoke French and did not know German. An almost identical situation exists in Upper Silesia, now claimed by Poland, the grounds and precise nature of whose claims we have examined at some length in Part I of this work.

When we examine the economic side of the ledger that is involved in the diminution of Germany's population by 14 per cent, consequent upon the aforementioned existent or possible territorial losses, we find that the resultant curtailment in her agricultural and mineral resources would reach a much higher percentage and, indeed, would so cripple the economic and industrial development of the German *Reich* as to make it, in the opinion of able economists, a matter of grave doubt as to whether a State, thus shorn of so large a part of its wealth, could continue to survive as an economic unit. More likely, the struggle for existence would result in the attempted emigration of millions of Germans, no longer able to find a tolerable existence in the Fatherland, to distant lands more favored. Or, from such a condition, a state of war and chaos

might arise that would include the entire Continent in its destructive orbit. A discontented, hungry, trouble-inciting mass of human beings would be evolved out of what was, by universal accord, one of the most orderly, disciplined and hardworking nations to be found anywhere in the world.

Now let us see just what the aforementioned territorial losses, if carried out in their entirety, would mean to Germany, with respect to their effect upon her production of foodstuffs. According to an estimate recently made by a well-known British economist the effect of these territorial losses on the yield of Germany's leading foodstuffs would be as follows:—

Product	Per cent of Diminution due to territoral losses
Wheat	17.4 per cent
Rye	21.7 „ „
Barley	22.3 „ „
Oats	15.9 „ „
Potatoes	23.3 „ „
Clover	18.1 „ „
Lucerne	16.5 „ „
Hay	13.3 „ „
Sugar beets	18.4 „ „
Horses	20.4 „ „
Cattle	15.8 „ „
Pigs	16.4 „ „
Sheep	14.2 „ „

Thus we perceive that by the various cessions which have been or may yet be wrung from Germany, the effect upon her food production would, in some vital instances, such as rye and potatoes, be to almost double the loss (14 per cent) which is suffered in population. Thus, Germany would stand to lose 21.7 of her rye crop which provides her with the bulk of her bread, and 23 per cent of her potatoes. In nearly all the particulars above mentioned, the loss in food production and in the production of live stock far exceeds the loss in population, and as a necessary corollary from these statistics, we would have left a nation requiring still greater imports of food than in the days of its great prosperity but without the means industrially to produce sufficient with which to pay for such imports. For, if, on the one hand, the districts referred to play a great role in Germany's agricultural production, they may in some respects be said to play an even greater role in her industrial production. For example, Upper Silesia and the Saar Valley alone produce approximately one-third of Germany's coal and contain nearly 50 per cent of Germany's total coal reserves. The Saar Valley which has been taken over by the French and the Silesian coalfields which Poland threatens to annex, show the following record of production.

Coal Production

	In Upper Silesia	In the Saar Valley
1881 . . .	10,404,000 tons	5,952,000 tons
1890 . . .	16,871,000 „	7,425,000 „
1900 . . .	24,783,000 „	11,173,000 „
1910 . . .	34,461,000 „	14,413,000 „
1913 . . .	43,435,000 „	17,013,000 „

The fore going figures taken by themselves would give the general reader but a poor picture of the tremendous role played by these two regions in Germany's industrial development, for the reason that, gigantic though the figures be and constituting as they do practically a third of Germany's coal production, they must nevertheless be accompanied by a corresponding picture of the manufacturing interests which have been established, have grown up and prospered in the immediate vicinity of the coalfields in question. These manufacturing industries are in many essentials so necessary for the very existence of any future German State that it is inconceivable that the country could maintain itself even measurably without them. For example, in Upper Silesia at the very mouths of the coal pits, in the city of Königshütte and vicinity, we find located some of Germany's principal iron and steel producing plants, as important to Germany as England's cotton industry is to the United Kingdom. In the same region at Chorzow is the great zinc

producing industry supplying 17.5 per cent of the world's production and 63 per cent of Germany's total production. We have here also the great German *stickstoff* factories, manufacturing nitrogen from the air and converting it into products essential for fertilizing the land. Here likewise we find a great central power station for providing electric power and light as wellas gas to the Upper Silesian industrial works in this region. This power station is one of the greatest central power plants in the world, employing some of the largest turbines known to the electrical industry. For a comparison we would have to go to the great plant of the Commonwealth Edison Company in Chicago which supplies current to the entire city, for street and house lighting purposes, besides furnishing the motive power for over 600 miles of street and elevated railway which traverse the city.

During the last few decades Germany's agricultural production has more than doubled, as the following figures show:—

Production in tons

	Rye	Wheat	Oats	Potatoes	Sugar
1880	4,952,525	2,345,278	4,228,128	19,466,242	415,000
1913	12,222,394	4,655,956	9,713,965	54,121,146	2,632,282

Between 1880 and 1913 not only the production of the great staple crops enumerated above, but that of meat also, has fully doubled, owing to the

application of science to industry. No similar progress has taken place in any other European country. It might therefore be expected that Germany's agricultural workers, and her rural population as well, should have greatly increased in numbers. As a matter of fact, both Germany's rural population and her rural workers have numerically declined, the vast increase of output notwithstanding. The colossal increase in population which has taken place in Germany has been confined exclusively to the towns, and it has been particularly great in the large towns, in the important manufacturing centres.

The rural population of Germany, the people who live in hamlets and villages of 2,000 and less, were in 1910 actually less numerous than they were in 1871, according to calculations recently made. During the same time the population of all towns of more than 2,000 inhabitants had grown from 14,894,974 to 38,971,406 or by 163 per cent. In the towns of from 2,000 to 5,000 people the population has increased by only 40 per cent., in the towns of from 5,000 to 20,000 inhabitants it has grown by 100 per cent., in the towns of from 20,000 to 100,000 it has increased by 175 per cent., and in the towns of 100,000 inhabitants and more it has grown by no less than 610 per cent.

As showing various stages in the rapid growth of Germany's leading cities we give below the census figures for the years 1875, 1890 and 1910 respectively.

	Berlin	Hamburg	Munich	Leipzig	Dresden	Cologne
1875	966,858	264,671	193,024	127,387	197,295	135,371
1890	1,578,794	569,260	350,594	357,122	276,522	281,681
1910	2,071,257	931,035	596,467	589,850	548,308	516,527

	Breslau	Frankfurt	Düsseldorf	Nuremberg	Charlottenburg
1875	239,050	103,136	80,695	91,018	25,847
1890	335,186	179,985	144,642	142,590	76,859
1910	512,105	414,576	358,728	333,142	305,978

	Hanover	Essen	Chemnitz	Stuttgart	Magdeburg
1875	106,677	54,790	78,209	107,273	87,925
1890	174,455	78,706	138,954	139,817	202,235
1910	302,375	294,653	287,807	286,218	279,629

	Bremen	Königsberg	Stettin	Duisburg	Dortmund
1875	102,532	122,636	80,972	37,380	57,742
1890	130,875	161,666	116,228	59,258	89,663
1910	247,437	245,994	236,113	229,483	214,226

	Kiel	Mannheim	Altona	Elberfeld	Gelsenkirchen
1875	37,246	46,453	84,097	80,589	11,295
1890	69,172	79,058	143,241	125,899	28,057
1910	211,627	193,902	172,628	170,195	169,513

	Barmen	Cassel	Bochum	Mülheim a. d. Ruhr
1875	86,504	53,043	28,368	15,277
1890	116,144	72,477	47,601	27,903
1910	169,214	153,196	136,931	112,580

Beyond the thirty towns for which statistics are given, Germany has fifteen other towns of more than 100,000 inhabitants, viz., Aix-la-Chapelle, Augsburg, Schöneburg, Wilmersdorf, Neukölln, Brunswick,

Crefeld, Dantzig, Erfurt, Halle, Mayence, Plauen Saarbrücken, Wiesbaden, to which, before the war, are to be added Strassburg and Posen. In the aggregate, therefore, forty-seven towns of more than 100,000 inhabitants.

An examination of the statistical table shows that all the German towns have grown with extraordinary rapidity; that the increase of population has been least great in the political centres and the residential and commercial towns, Berlin and its suburbs excepted, and that it has been fastest in the manufacturing towns, and particularly in those which live by the exploitation of coal and iron. Since 1875 the population of Dortmund has grown fourfold, that of Düsseldorf four and a half-fold, that of Duisburg and Kiel sixfold, that of Mühlheim a. d. Ruhr sevenfold, that of Gelsenkirchen fifteen fold. Hamborn, between Duisburg and Essen, which was a village a few decades ago had 32,597 inhabitants in 1900, 73,454 inhabitants in 1905, and 101,703 inhabitants in 1910. All the towns named are coal and iron centres, and all but Kiel (shipbuilding) lie close together in the Ruhr district. The reader is referred to Part I of this work for a similar analysis of the growth of the industrial towns in Upper Silesia.

The extraordinary effect of coal and iron, and especially of coal, upon population has already been alluded to in Part I in connection with Upper

Silesia. A similar phenomenon is to be observed in the Ruhr district. On and around that district, on territory which measures about forty miles by twenty, an area about as large as a small English or American county (for example the county of Surrey in England, or Onondaga county in New York State) may be found eleven out of the forty-seven German towns of more than 100,000 inhabitants. These are Düsseldorf, Essen, Duisburg, Dortmund, Elberfeld, Gelsenkirchen, Barmen, Bochum, Mühlheim a. d. Ruhr, Crefeld, Hamborn. In addition, there are situated in the district named fifty-five towns which have from 10,000 to 100,000 inhabitants, and a number of these are rapidly approaching the 100,000 limit. This narrow district, whose landscape is almost literally as thickly strewn with smoking chimneys as a forest is with trees, is the greatest centre of population in Germany. It was inhabited, in 1910, by 5,818,237 people, as against 4,840,143 in 1905 an increase of about 1,000,000 within five years. Only in the United States can one find similar examples of urban growth. In the five years, 1905-1910, about one million Germans moved from other parts of the Empire and settled in the Ruhr district.

Now, all of these facts and figures if they determine anything, establish that industrial progress determines population and that coal determines industrial progress. In other words, coal is the

mother of industry and of population. If any of the great coal-producing countries, the United States, Great Britain and Germany, should suddenly be deprived of its coal supplies, the population would starve and rapidly die out or emigrate, for the energy stored up in coal, supplies energy and power to industry, and the greater or less vitality of industry means the greater or less vitality of the nation.

If we look at maps on which the coalfields are indicated, we find invariably that the greatest centres of population occur on and around the great coal-fields. Population is densest in the United Kingdom, in Germany, in the United States, in Belgium, in France, in Russia and in Poland, on and close to the great coalfields. Fuel has been the dynamo that moved the iron industry, as from England to the forests of Germany for charcoal, and back to England for coke, from the forests of New Jersey, Carolina and Maryland to the anthracite of the Schuylkill valley and thence to the Upper Ohio basin for Connellsville coke. With the widening of fuel supply due to cheap transportation and the new processes of coke making which enable the iron-master to get good coke in many coal fields, the making of iron spreads itself about, but as it takes three tons of coal to smelt a ton of iron, it is, generally speaking, cheaper to bring the iron to the coal than the coal to the iron. Likewise it is cheaper to carry wool, cotton and other raw materials

to the coal fields and to manufacture near the pit's mouth than to carry coal to the harbor towns for making woolens, cotton goods etc. Sheffield, Manchester, Glasgow, Pittsburg, Essen, Duisburg, Dortmund and a score of other large cities, in the United States, Great Britain and Germany, owe their rise to the vicinity of the coalfields.

Other examples might be given of the importance of coal in the development and prosperity of a country. Thus, it was coal and steam that enabled the American people to complete the conquest of the American continent. In the two centuries between the founding of Jamestown and the marketing of coal in Pennsylvania, the colonists had slowly struggled westward through the forests and mountains and settled the river districts of western Pennsylvania, Kentucky and Ohio, but the conditions of transportation in the west were such that no populous commonwealth could arise. Exports of grain and meat and a little lumber went to New Orleans down the Ohio and Mississippi Rivers in flat-boats which were knocked to pieces because they could not be pushed up stream against the swift current. Imports were brought in wagons over the Allegany mountains to Pittsburg and thence down stream to the points where they were consumed. Economic and social progress was difficult under such conditions. In 1812 the steamboat changed all this by ascending the Mississippi River and

making a two-sided commerce. It enabled the American people emigrating by the power of steam to attack the heart of the continent in a hundred places on the great navigable system of the Mississippi between Pittsburg, Kansas City, Minneapolis and up-stream points on many smaller rivers. Two decades later the steam-driven locomotive broke the shackles that had for ages held civilized man by the river bank and seashore, so that in half a century the American people spread five times as far as they had in the two preceding centuries.

If, now, we have succeeded in giving the reader a general idea of the importance of coal to the world-at-large and to Germany in particular, and if we have, in some measure, been able to picture the consequences that might flow out of proposed measures to deprive Germany of a part of her coal supply, it will unquestionably add to the convincing force of our reasoning if we now conclude this branch of our argument by quoting from a British Government report on conditions prevailing in Germany after the Armistice, as follows:—

"The great increase in German population during the last twenty-five years was rendered possible only by exploiting the agricultural possibilities of the soil to the greatest possible extent, and this in turn depended on the industrial development of the country. The reduction by 20 per cent in the productive area of the country, and the 40 per cent

diminution in the chief raw material for the creation of wealth, render the country at present over-populated, and it seems probable that within the next few years many million (according to some estimates as many as 15,000,000) workers and their families will be obliged to emigrate, since there will be neither work nor food for them to be obtained from the reduced industries of the country."

CHAPTER SEVEN

GERMANY'S ECONOMIC POSITION AND ITS EFFECT ON THE BALANCE OF POWER

It has frequently been remarked by historians that writers on contemporaneous events, living close to the age they wish to describe, are seldom fitted to judge of the relative importance of the historic events which it is their purpose to interpret. It is, however, only at a remote distance from the actual occurrenses that it seems possible to judge truly, and to assign to each event its proper weight and significance. The history of an entire generation may be but an incident in the development of a nation's policy which may require centuries to consummate.

Accordingly, if we permit our minds to travel over the wide ranges of European history of the past five hundred years, we find, one after the other, particular events or actions elevated to a position of chief importance by this or that historian for the purpose of explicating his own particular view with respect to the significance of historic happenings. These estimates are nearly all false.

The great Italian Republics of Venice, Genoa, Florence and Pisa, during the fifteenth century were

the foremost centres of commerce and civilization in all the world, but already at the beginning of the sixteenth century their glory began to depart from them, and before the middle of that century became the heritage of the west European States, Spain and Portugal—and these latter States maintained their ascendancy until they in turn were displaced from their position of supremacy by the rising star of Holland.

As the sixteenth century belongs to Spain and Portugal, so the seventeenth may be said to belong to Holland. During that century she led all other nations in the arts, in maritime strength, in trade, and in civilization. The closing years of that century already saw the beginning of her decline and the rise of the power of France. But the principle of the European balance of power had already had its birth in the minds of Britain's able statesmen of the Elizabethan era, and Lord Burleigh, the Cecil of his day, introduced it into European politics when he set out to break the power of Spain. Later the principle was sucessfully applied to Holland whose rise in the seventeenth century was resisted and finally overcome.

The eighteenth century, in its turn, is marked by the long duel between France and England, not only for European supremacy, but for world supremacy.

Between 1688 and 1815, a period of 126 years. England conducted warfare 64 years or one half of

the total. Within this time, she waged seven distinct wars—five against France from the beginning, and both the other two, though the belligerent at the outset was in the first Spain and in the second the thirteen British colonies in North America, became in a short time and ended as wars with France. It is, therefore, not incorrect to say that all of England's seven wars between 1688 and 1815 were with France as her chief and final opponent. The definitive decision in this gigantic rivalry of the eighteenth century between France and England fell to the latter and Britain became the greatest power in the world.

The nineteenth century may be said to represent England's Golden Age. She is undisputed mistress of a quarter of the globe. The sun never sets on her dominions, "Brittannia rules the waves," and gold pours in an endless cataract into her financial marts as tribute to her commercial and industrial greatness, from every nook and corner of the globe.

In accord with the truism we have herefore mentioned that the significance of historic events is only to be understood at a distance, we find that most of the events which fill the early written histories of the fifteenth century are misconceived with respect to the real influence they bear on the rise, development and fall of these Italian States to which we have referred. Court intrigues, internecine wars, conflicts between State and State, quarrels about

constitutions, the rivalries of patrician houses, and of patrician and plebeian, commercial treaties, codes of laws, the influence of the Church, changes of Government and of rulers—all of these are variously treated as of more or less importance in the historian's analysis of cause and effect.

The truth is, however, that all of these historic phenomena were of small consequence, in fashioning the destiny of the Italian Republics during the fifteenth century, by the side of the one great fact that those cities were the business centres of the world, and the Mediterranean was then the one great commercial pathway and chief seat of industry and civilization. It was the civilizing sea that made them pre-eminent in art, science and commerce. The Mediterranean carried on its bosom or lapped with its waves, the industry, trade and civilization of the age. The Atlantic Ocean, until after the voyages of Columbus and Vasco da Gama, was a boundary, a limit — not a means of communication. Spain, Portugal, France, Holland and England were then backward, unprogressive communities. Commercially, at that time, even Flanders was more important than England. Britain had few manufactures. She produced chiefly raw materials. She had no mercantile fleet, no navy. These came later — the foundation for both was laid during the reign of Queen Elizabeth.

But Columbus changed all this. He relegated

the Mediterranean and its great commercial States to a secondary place when he discovered the New World, and made the Atlantic Ocean the future great highway of commerce. It was not the Gauls, but Columbus who toppled Italy from its peak of pre-eminence among the nations of the world, and it is merely a striking coincidence that the Turkish sea-power cleared the Mediterranean of its commerce, at the very time when it was being drawn away by natural processes to the Western coast of Europe by the discovery of the New World and the attractive power of new and greater riches beyond the Atlantic.

As has been stated, two west European nations now came to the fore — Spain and Portugal. Spain's good fortune was that she promoted the enterprise of Columbus and through him claimed title to possessions in the New World. Portugal had at least an equal right to recognition through the genius of Vasco da Gama. Only eight years after the first voyage of Columbus, Vasco had discovered Brazil, as he had already discovered India. By the end of the sixteenth century, a large part of the American Continent was ruled from Spain by viceroys and Portugal had sent her governors to rule in the Indian Ocean.

If, now, we seek to draw a conclusion from these events, it is that, again in the rise and fall of great States, control of the sea and the strife for com-

mercial supremacy play the chief part in the historic events of the period. Portugal, in the nature of things, declined because she had so small a base from which to operate. In the case of Spain, her decline dates from the destruction of the Spanish Armada by England in 1588. Her naval and maritime supremacy suffered thereby an irreparable blow, and gave way to the rising sea-power and control of the waves by England.

But England's power at this time was only in its incipient stages. Holland, likewise a maritime nation, now arose to first place because of Spain's weakness through the loss of her navy, and England's still undeveloped strength. Holland had revolted against Philip II of Spain and in the long struggle that followed, actually grew rich out of the war. The Dutch attacked the Spanish possessions in America, for Spain, as has been pointed out, had rendered herself vulnerable there. She was unable to defend her own possessions and the result was that Holland became the great commercial State of the world. Through a great part of the seventeenth century Amsterdam was the world's chief commercial port, and the Dutch practically monopolized the sea-traffic of the globe.

During all this time, a constant struggle was going on between the five western nations for supremacy in the New World. America was the prize for which they were contending. During the sixteenth

century, Spain and Portugal had little opposition. They had the start of the other nations by virtue of the priority of their discoveries. During the seventeenth century the prize of victory went to Holland, but her victory was short-lived. War with France and the rise of British sea-power put an end to her glory. Competition for the New World continued, however, between these five maritime Powers of Western Europe all through the eighteenth century. The chief struggle now, however, was between France and England.

We have already referred to the seven great wars of England with France between 1688 and 1815, ending in England's complete final victory. Here again, many historians fail to understand the proper significance of French and English events during this century and a quarter of strife. We are told a great deal about struggles for Constitutional rights; the rise and fall of dynasties; the intrigues of Court favorities; the troubles of Cabinet Ministers; the conflicts between aristocracy and democracy; the schisms in the Church, and the contests between the Reformation and Catholicism.

None of these, however, played a decisive part in the history of either of the two nations during this period. The part played by the Reformation in the politics of the European Powers has been a particular subject of misconception. As the Reformation and the discovery of the New World were

almost simultaneous events, the former is sometimes given more credit than it deserves for marking the turning point between the Middle Ages and the Modern Era. In reality it was the discovery of America and of the new route to India, with the commercial possibilities that were attached thereto, which heralded in this modern age. For, now, it is the interests of trade and industry that concern the chancelleries of the world much more than religion. The interests of religion may be used as a pretext to start a quarrel, but at the real shrine of the affections it is Mercury, the god of industry and commerce who is really worshipped.

From the time that the New World began to open up possibilities of wealth and commerce to the European maritime powers, from that moment the Reformation as a force in politics grows of diminishing value. The Thirty Years' War, begun in 1618, was the last of all the wars of religion and marks the event that signifies the beginning of the war of States. Already in the midst of the war and at its very height, it lost its religious character when a coalition of Calvinists, Lutherans, and Catholics was launched against Austria. The moving spirits in this coalition were a Catholic Cardinal and a Protestant King, the former sternly suppressing the Huguenots at home while encouraging them abroad, the latter owing his kingship to a revolt against Catholicism. The combination of Richelieu, the

greatest statesman, and Gustavus Adolphus, the greatest warrior of his age, effected this new departure in world politics which forms the starting point of all future attempts on the part of the European Powers to maintain or increase their respective positions of strength by means of coalitions and alliances.

In the time of Cromwell, Protestant England was united with Catholic France against Catholic Spain. William the Third, a Protestant King, formed an alliance with Catholic Powers and attacked Catholic France. In the war of France and England as allies against Holland in the seventeenth century, we see one Protestant country allied with a Catholic country and attacking another Protestant country.

Thus, we see in these wars how completely commercial interests outweighed those of religion or any others interests in the domain of foreign politics. "When Cromwell made war on Spain," says the English historian Professor Seeley, "it is a question whether he attacked her as the great Catholic Power or as the great monopolist of the New World." Similarly, the contest of England with the Dutch arose over rival claims to sovereignty in the neighboring seas which the herring fisheries had made immensely valuable, and out of competition for the world's carrying trade and the commerce of the East Indies. Further causes of strife existed in the British Navigation Acts of 1650-1651, which struck

a crippling blow at the Dutch carrying trade by their provisions that all goods imported into England or its colonies must be brought either in British ships or in those of the producing country.

William the Third's war against France had for its main purpose the removal of France as a competitor of England in the New World. Canada, at that time a French colony, was to be united by the French with their other French colony in North America, Louisiana, by a chain of posts along the Mississippi. This design, if carried out, would have flanked England's possessions on the Atlantic seaboard and would have threatened her supremacy in North America. England gained some advantages over France in William the Third's war, but as the French menace, even though greatly weakened, still remained, Britain renewed the contest at intervals until finally, at the close of the Seven Years' War, France had to surrender her most important North American possessions to her antagonist.

When, through the military genius of Napoleon, it seemed that France might yet recover from the wounds England had inflicted on her during a hundred years of warfare, England again intervened to reduce her old opponent to impotence. The Napoleonic wars were essentially a struggle between England and France. England succeeded in this seventh and final contest with France because the genius of Napoleon was unequal to the task of forging an

effective weapon against the overwhelmingly superior British Navy. He foresaw everything except the deadly effect of Britain's powerful naval arm. England's command of the seas outweighed the effect of all of Napoleon's land victories.

But this entire contest was continued for twenty years by Great Britain in coalition with other European Powers for one purpose and for one purpose only, namely, to prevent France from upsetting the balance of power on the Continent and from attaining to the hegemony thereof, and, as a result, forcing Britain into a secondary position both commercially and politically. And England's ultimate success was largely due to the fact that she had always kept herself isolated from the troubles of the Continent and sought no territorial conquests there. For, whenever England entered into the European arena of war, it was to serve larger ends. Thus, Pitt assured his countrymen that in assisting the King of Prussia to fight France in the Seven Year's War, he would conquer America for them in Germany.

But, while Britain always kept her larger aims in view. France, for her part, divided her strength and pursued both a Continental and a world policy. She wished not only to develop a colonial empire but also to make herself supreme on the Continent of Europe. This two-fold ambition, however, proved too much for her, and as a result of her too wide-reaching aims, she failed to develop enough strength

to retain her trans-oceanic possessions, and likewise had to relinquish some of her claims in Europe. Nor, apparently, have French diplomacy and statecraft accepted the lesson of their failure, for the French policy of the present day is precisely what it was in the eighteenth century.

The object of British policy, on the other hand, so far as the European Continent is concerned, has been to keep the other nations in check in so far as they constituted a menace to her maritime and commercial supremacy, and to accomplish this by means of a system of checks and balances, setting off, for example, a strong Germany against a too powerful France, and carrying on even a Crimean war to prevent, as Lord Palmerston once stated it, a too powerful Russia from overthrowing the Teutonic civilization of central Europe.

Accordingly, from the time of Elizabeth, it was a cardinal principle of British policy that the Low Countries should not be allowed to fall into the hands of any strong Continental Power. The port of Antwerp, which England regarded as the "loaded pistol pointed at London", must, at all hazards be kept out of the hands of any Power possessing the requisite strength to use it as a base from which to operate against British maritime interests and British sea-power, and as a corollary the overthrow of the balance of power in Europe. Britain has seen her position thus threatened upon various oc-

casions, by France, by Holland at the height of her power, and again quite recently by Germany. And it is precisely for the foregoing reasons that British statesmanship perceives in the newly-concluded Franco-Belgian Alliance a potential threat to British security and commercial primacy.

Looking backward now, we see that three great milestones mark England's career, from a backward, feudal State before Elizabeth, to an unrivalled position as the greatest Power in the world—a position which she held down to the outbreak of the Great War, but which is now being disputed with her because of the destruction of the old balance of power in Europe.

Firstly, the naval engagement which destroyed the Spanish Armada and with it Spanish sea-power in 1588. This date was the beginning of Britain's might as a naval Power.

Secondly, the Treaty of Utrecht at the close of the War of the Spanish Succession. For approximately half a century prior to the conclusion of this treaty in 1713, France had held the foremost position as a great Power. The Treaty of Utrecht, however, marks the beginning of Britain's superior sway in world matters. Her former rivals, Spain, Holland and France had become less troublesome competitors.

Thirdly, the Treaty of Paris concluded at the end of the Seven Years' war in 1762. The Seven Years' war struck France another severe blow and by the

Treaty of Paris gave Britain a new position of strength and prestige. This Treaty practically confirmed to England the control of the North American Continent. Since the Paris Treaty, the British Empire has added new vast tracts of territory to its domains. The American Colonies, it is true, broke away from the Motherland in 1776, but otherwise Britain's great Colonial Empire has remained unimpaired and has been expanded to include almost the greater part of the three great Continents of Asia, Africa and North America, besides the entire territorial region of Australasia.

We have now completed our outline of the controlling causes for the rise and fall of the leading States of the world from the fifteenth to the nineteenth century. We have shown that the seat of the greatest world power moved from the shores of Italy to the western shores of Europe. We have shown that first Spain and Portugal succeeded to the mastery, then Holland, later France, and finally England. We have shown that the underlying cause for the transfer of the seat of power from one country to another continued to remain the same, namely, the ability of a nation to secure and retain control of the principal sea-routes and thereby the mastery of trade and commerce. Moreover, England's command of the seas made it possible for her to abandon the slow wealth-producing possibilities of agriculture for the rapid

wealth-producing possibilities of industry, her food supply from overseas being assured by her sea-power. And in the end, England succeeded over her rivals because her position as an island kingdom gave her certain advantages over her competitors, principally, in that by her isolated position she became free to devote all her energies to the attainment of the one grand object, and her statesmen, uniformly, from the days of the overthrow of the Spanish Armada down to the present time have been ruled by one single policy — that England's mastery of the seas must be retained and extended wherever possible, and what is most vital of all, that England must resist, with all the means at her disposal, every attempt on the part of any other Power or combination of Powers, to impair her maritime control, or to disturb the balance of power in Europe, for the attainment of the hegemony by any one Power on the Continent has always been regarded in England as the equivalent of a direct menace to her sea-power. By persistently pursuing the foregoing policy Britain prevailed over her competitors to such an extent that at the opening of the Great War she controlled approximately fifty per cent of the carrying trade of the world and her navy was required to be superior in strength to that of any three European nations combined. Moreover, no single European Power had succeeded in obtaining the hegemony over the Continent.

The system of checks and balances still held good. This was the situation of things as it existed during the nineteenth century and down to the outbreak of the Great War.

The outcome of the recent war and the imposition of destructive peace terms upon Germany have definitively removed that country from Britain's pathway, as a formidable rival for some time to come, and if the terms which still remain for imposition upon Germany are exacted to their fullest extent, it is certain that the power of Germany will have been broken for all time.

But, as England well knows, the question of world pre-eminency is not so easily solved in this manner. In the days when Rome destroyed Carthage it was a different matter, for Carthage was the only formidable rival that Rome had. In the modern world it is otherwise. The weakening of one State through war has, in the Modern Era, invariably meant the strengthening of some other State. Let us take, for example, the case of Germany and France. Before the war, Germany was stronger than France because of her superior man-power and because of her superior industrial strength. Since the war, a large part of this industrial strength has been transferred to France. Let us see how this happened.

Before the war the actual known iron reserves of Europe amounted, in round figures, to 4,700

million tons of which Germany possessed about one-fourth, France also about one-fourth and the United Kingdom about one-tenth. By the cession of Alsace-Lorraine to France, Germany at one stroke has lost 90 per cent of all her iron ore supplies and the resources of France having been thereby doubled, the latter country now actually possesses approximately one-half the iron supply of Europe, so that whereas Britain, in this regard, formerly stood opposite to her most formidable rival in the ratio of two and a half to one ($2\frac{1}{2} : 1$), she now stands opposite her new rival in the ratio of five to one (5 : 1), which is quite another thing.

Now it is a fact that prior to the war Germany, notwithstanding her rich supplies of iron are, imported no less than 25 per cent of her raw iron from Sweden Spain, France, Belgium and other countries, and it follows that in the future practically all of her iron ore will have to be imported, and if it becomes impossible, through weak finances or by reason of other causes, to do so, then her entire iron and steel industry stands face to face with ruin. But the effect upon Germany's balance of trade of so much buying of iron ore abroad must necessarily be disastrous, and in such a situation the idea of having to pay large indemnities is most absurd, for, with the best will in the world, it could not be done.

As if this were not enough ruin to bring on a

nation, the Peace Treaty, as we have seen, also contemplates depriving Germany of a part of her coal resources. These coal resources, if they are taken from Germany and annexed to France directly, as by allowing the latter country to occupy the Ruhr district, or indirectly by allowing Poland to annex Upper Silesia, will be equivalent to making France the one and all-powerful nation of Europe. On the other hand, if France is not permitted to have her way with respect to depriving Germany of her coal, then as France will have the bulk of the iron and Germany the bulk of the coal, these two nations will in time and by force of circumstances, regardless of their feelings towards each other, be driven to lay aside their nationalistic quarrels and together constitute themselves into a Continental block for their mutual well-being.

England has therefore to chose whether she prefers a single all-powelful France on the Continent, or a Continental Franco-German block, either of which contingencies would be equally fatal to Britain's future position in the world.

Of course it is possible that if Germany is freely accorded the facilities for restoring her trade and industry and if some of the more ruinous provisions of the Peace Treaty are scrapped, she will prefer to go her own way and avoid an economic alliance with France. This is among the possibilities. But it is a possibility that must be taken advantage of

quickly, for a drowning man will clutch at any straw, and Germany will be grateful even to France if France is clever enough to save the Fatherland from ruin.

CHAPTER EIGHT

GERMANY'S ACTUAL COAL RESOURCES

In a previous chapter we have studied the productive resources of the Upper Silesian coal fields. These fields are usually regarded as, in all respects, second in importance to the Rhenish-Westphalian (Ruhr) coal fields. We may accept this as true with one important reservation, namely, that as regards the amount of coal workable within 4000 feet of the surface, the Upper Silesian fields stand first. With respect to the quality of the coal for coking purposes and with respect to the proximity of the fields to home and foreign markets the Ruhr district must undoubtedly be given the preference.

It will be recalled that in a previous chapter mention was made of the findings of varions British expert investigators to the effect that under present conditions coal mining cannot be conducted at a depth lower than 4000 feet (about 1200 metres). With this opinion German experts entirely agree but it is customary in estimating the amount of coal reserves possessed by any country to include the

amount of coal found even 2000 metres below the surface and the result is that when such estimates are published to the world, an entirely wrong idea is formed with respect to the country's actual wealth in coal. Accordingly, many of the leading experts who have written about Germany's coal resources have not scrupled to make use of the large figures obtained by estimating as coal reserves all coal found down to the 2000 metre level, regardles of the fact that coal mining at a depth below 1500 metres and probably even below 1200 metres is utterly impracticable if not impossible.

Now, the trouble with the Westphalian fields, according to the report made by German experts to the Geological Congress at Ottawa, is that their relative importance is less at the higher levels (namely, depths less than 1000 metres) and increases constantly the lower one goes. If we take into consideration all the coal in Germany down to the thousand-metre depth, then the Ruhr district contains only about one-third (30 to 32 per cent) of Germany's coal. But while the relative importance of the Westphalian coal increases at depth, that of the Upper Silesian coalfields diminishes the lower one goes. Down to 1000 metres the Silesian fields contain about 60 per cent of Germany's coal. The coalfield third in importance, namely, that of the Saar basin, contains 7.87 per cent of Germany's coal down to 1000 metres.

The Report in question sums up Germany's coal resources as follows, according to the depths at which the mineral is found:—

Down to 1200 metres	194,537,000,000 tons =	47,45 per cent
From 1200 to 1500 metres	77,447,000,000 tons =	18,89 „ „
Total. . .	271,984,000,000 tons =	66,34 per cent
From 1500 to 2000 metres	137,982,000,000 tons =	33,66 „ „
Grand Total .	409,966,000,000 tons =	100,00 per cent
Lignite	13,390,000,000 tons	
Total coal and lignite	423,356,000,000 tons	

According to the report quoted, the quantity of coal contained in the Rhenish-Westphalian field is classified as follows. It will be noted that, like the British estimates of two Royal Coal Commissions already referred to, only seams more than 12 inches thick are regarded.

Actual Reserves

Seams more than 12 inches thick

	Tons
up to 1000 metres	22,708,000,000
1000—1200 „	5,306,000,000
1200—1500 „	5,808,000,000
1600—2000 „	5,628,000,000
Total . . .	39,450,000,000

Probable Reserves

Seams more than 12 inches thick

	Tons
up to 1000 metres	7,708,000,000
1000—1200 „	8,745,000,000
1200—1500 „	10,455,000,000
1500—2000 „	17,788,000.000
Total . . .	44,696,000,000

Combining these two tables with respect to seams that are practically workable, we have

Seams more than 12 inches thick

	Tons
up to 1000 metres (actual reserves) . . .	22,708,000,000
„ „ „ „ (probable reserve). . .	7,708,000,000
Total . . .	30,416,000,000
1000 to 1200 metres (actual reserves) . .	5,306,000,000
1000 to 1200 metres (probable reserves) .	8,745,000,000
Total . . .	14,151,000,000
Grand Total . . .	44,567,000,000

Now comparing the foregoing results with the authenthic figures furnished in Chapter III with respect to the reserves of the Upper Silesian coal fields, we perceive that the latter contain an estimated amount of 60,000 million tons up to 1000 metres, and 14,460 million tons in the seams between the 1000-metre and the 1200-metre level. Comparing these figures with those above given for the Ruhr district, we find that Upper Silesia has double the quantity in the more easily worked levels (up to 1000 metres), and 74,460,000,000 tons in the aggregate

up to 1200 metres as against only 44,567,000,000, for the Ruhr district.

Now, it is a fact that ought not to be overlooked that a great deal of trouble has been made for Germany by the unwittingly harmful nature of the aforementioned report made by her experts to the International Geological Congress at Ottawa in 1913, the reports of which were given to the public in a published volume entitled "Coal Resources of the World."

The German report in question gave an estimate of the *actual, probable and possible* reserves of all the German coal fields at various levels from 1000 metres down to 2000 metres. The International Congress Report gathers up all these figures and by adding them together makes a sum total of German coal resources amounting to 423,356,000,000 tons and the coal resources of all Europe are stated by the Congress to be as follows:—

Germany	423,356,000,000	tons
Great Britain and Ireland	189,535,000,000	„
Russia	60,000,000,000	„
Austria-Hungary	59,269,000,000	„
France	17,583,000,000	„
Belgium	11,000,000,000	„
Spain	8,768,000,000	„
Holland	4,402,000,000	„
Balkan States	996,000,000	„
Italy	243,000,000	„
Sweden, Denmark and Portugal	184,000,000	„
Total	784,192,000,000	tons

In furnishing figures for the foregoing list, not a single State used as basis of computation, coal reserves at levels beyond 4000 feet (1200 metres), excepting Germany. Most important of all, what was the basis of calculation of the British experts for the coal reserves of Great Britain and Ireland?

We have already given in Chapter III four separate estimates of British coal resources of which the last one, made in 1915 by Professor Jevons places the amount of such resources at 197,000 million tons. In making all such estimates two overruling factors are considered by the British experts, as we know on the word of no less and authority than Professor William A. Bone, Chairman of the British Fuel Economy Commission (1915—1917)*. These two factors are:— "(1) the maximum depth at which it is possible to conduct mining operations; and (2) the minimum thickness of seams which can profitably be worked. The first of these factors is determined principally by the increase in temperature as we descend into the bowels of the earth. In Great Britain the temperature at 50 feet below the surface is constant throughout the year at 50° Fahr., and then it increases 1° Fahr. for every 60 feet lower tn depth. Both of the Royal Commissions adopted 4000 feet as the maximum limit of practicable working, at which depth the temperature might be expected to be 116° Fahr.

* Coal and its Scientific Uses by Prof. Wm. A. Bone (page 16).

and one foot as the minimum workable thickness of seam."

"Moreover, it should be noted," says Prof. Bone, "that the Royal Commissions' figures represent the estimated *net* available amount of coal remaining unworked after certain allowances had been made, not only for coal which must be left underground as barriers for the support of surface buildings, but also for losses in working due to faults and other natural causes, which allowances amounted to about 20,000 million tons according to the 1905 commission's estimate. Also, the 1905 estimate did not include the Kent coalfields and other 'concealed' measures which were taken into account in Dr. Strahan's revised estimate. Professor H. S. Jevons, who considered that Dr. Strahan erred if anything on the safe side, gave 197,000 million tons as a maximum quantity within 4000 feet of the surface. If then 200,000 million tons be taken as a proximate outside figure and an allowance of 15 per cent be made for 'pit wastage' the net coal which will actually be available *at the surface* would be about 170,000 million tons, or say about 580 times the amount actually raised in the year 1913."

From the foregoing analysis by Prof. Bone of the premises upon which are based the estimates of British coal resources, it is apparent that every effort is made to bring the British figures down to an irreducible minimum. The German experts, on

the other hand, for reasons which it is hard to fathom, took just the opposite course in presenting their estimates of the Fatherland's coal resources to the International Geological Congres with, as we venture to believe, quite disastrous results for their country. For, if there is one thing that has been ding-donged into the minds of the public in both France and England ever since the Report of the International Geological Congress became known to the world, it is that Germany constituted a menace to the security of both countries because she possessed a monopoly of the European reserves of coal and a lion's share of the reserves of iron. No wonder, then, that certain interests in each of the two countries named took alarm and were willing, in the critical days that preceded the outbreak of the war, to lend the weight of their immense authority to the proposition of putting down so formidable a rival. Had it been realized in England in those critical days that Germany in reality possessed no greater coal reserves than Britain herself, and that the defeat of Germany would mean the loss of practically all her iron and the corresponding enrichment of France, perhaps a final successful attempt could have been made to stop the war by making the timely announcement* that in case Germany

* This statement (that the war could have been stopped by such a timely announcement) merely expresses the author's accord with the argument of Lord Loreburn is his book *How the War Came*

attacked France, Britain would be found on the side of her enemies. But unconsciously there had crept into the minds of British statesmen the idea, based on an error, that Germany was a too formidable rival to be longer suffered to remain at large, for it had been represented to them that Germany possessed nearly three times as much coal as Britain and that in twenty years'time Germany's coal output would nearly double Britain's. Add to this the further fact that Germany was represented to have three times the iron resources of Great Britain and we shall understand the spectre of Britain's industrial doom that haunted the minds of her statesmen.

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and also with a statement appearing recently in a French periodical, written by ex-President Poincaré in which a similar view is expressed.

APPENDIX

According to the Statistical Abstract of the United States Government Reports, the coal production of the world has increased as follows:—

	Tons
1800	11,600,000
1820	17,200,000
1840	44,800,000
1860	142,300,000
1880	340,000,000
1900	800,000,000
1910	1,141,600,000
1917	1,430,000,000

At the present time the United States alone produces as much coal as all the other nations combined.

Coal Production in 1845

According to R. C. Taylor's Statistics of Coal, published in 1848, the coal production of the world was as follows:—

Production of Coal in 1845		Per cent of world production
Great Britain	31,500,000 tons	64,2
Belgium	4,960,070 „	10,1
United States	4,400,000 „	8,9
France	4,141,617 „	8,4
Russia	3,500,000 „	7,0
Austria	659,000 „	1,4
Total	49,161,034 tons	100,0

INCREASE IN PRODUCTION OF COAL

The world's demands for coal which in 1863 amounted to some 130,000,000 tons per annum, had by 1913 increased tenfold. Such a tenfold increase in fifty years represents a "compound interest" rate of practically 5 per cent, per annum throughout the whole period. During the last ten years of it, this rate of increase was fully maintained as follows:—

	Total demand. Mill. Tons
1903	800
1908	1000
1913	1250

That the rate is not diminishing is apparent from the estimated amount of consumption in 1918 which was appoximately 1500 million tons.

World's Output of Coal: Millions of Tons

	1903	P. cent	1908	P. cent	1913	P. cent
United States	319.5	40.0	415.8	41.5	562.6	45.0
Great Britain	230.4	28.8	261.5	26.0	287.4	23.0
Germany	116.6	14.6	148.6	14.8	191.5	15.3
France	34.3	4.3	36.8	3.7	40.1	3.2
Belgium	23.8	3.0	23.7	2.3	22.8	1.8
Russia	16.5	2.0	29.4	2.9	28.8	2.3
British Possessions	26.5	3.3	42.0	4.2	50.0	4.0
All other countries	32.4	4.0	43.2	4.6	66.8	5.4
Total	800.0	100.0	1000.0	100.0	1250.0	100.0

In 1865 the United Kingdom produced 55 per cent of the world's coal, Germany 15,5 per cent, the United States 13,5 per cent. In 1913, as the above table shows Germany's percentage remains the same as in 1865, but the United States has advanced to 45 per cent and the United Kingdom has fallen to 23 per cent. It is interesting to note further that the percentage of world production of the three countries combined, was practically the same for the two years compared, namely 83,5 per cent. Since the war the percentage of world production to Britain's credit has sunk still further and is now no more than $16^{2}/_{3}$ per cent. Germany's production has also fallen off. The progress of coal production in the United States may be seen in the following table.

	Tons
1810	20
1840	1,848,249
1860	13,044,680
1880	63,822,830
1900	240,789,310
1910	447,853,909
1913	504,520,000
1917	640,729,680

Of coal lands the United States possesses 450,839 square miles. Coal is being mined in 29 States and with an estimated available supply as follow:—

AVAILABLE COAL SUPPLY IN THE UNITED STATES

Anthracite	21,000,000,000	tons
Bituminous	1,661,000,000,000	„
Sub-bituminous or black lignite	650,000,000,000	„
Lignite	743,000,000,000	„
Total	3,076,000,000,000	tons

Of this amount 1,922,000,000,000 is easily accessible and 1,153,000,000,000 is accessible with difficulty.

The author does not cite the inventory of the wold's coal supplies contained in the three volume monograph *Coal Resources of the World* which was placed before the International Geological Congress held at Ottawa in 1913, for the reason that the estimates therein presented, in the form in which they have been most frequently quoted by economists throughout the world, are utterly misleading, for until all the countries agree upon some common rule for estimating their coal reserves there can be no just basis for a comparison as between the coal supplies of one country and those of another.

John Cadman, President of the Institute of Mining Engineers in England has made public, in a recent address before that body, the following figures with reference to the annual coal production per person employed:—

	United Kingdom	Canada	Australia	United States
1886	312	341	?	?
1900	298	457	426	494
1906	275	439	462	596
1912	244	472	542	660
1916	263	471	547	731

In the United Kingdom the annual production per miner is still on the decline as the following figures show: —

1917 . . .	250	tons per person
1918 . . .	236	„ „ „
1919 . . .	197½	„ „ „

This decline in production has been going on for the past thirty years in the United Kingdom and as Professor Louis says, "may be to some extent accounted for by the fact that the thicker and more easily worked seams are gradually becoming exhausted, and the production from the thinner seams is gradually forming an increasing proportion of the total, but the diminution in efficiency due to this cause should be far more than counterbalanced by the increased use of underground machinery, especially of coal cutters and face conveyors, which greatly multiply the working capacity of the hewer."

The poverty of European as compared to American coal fields is well shown, in the following table, in the comparative prices and productivity of miners.

	Yearly output per miner in tons		cost per ton at mine
	1899	1908	1909
England	311	279	$ 2.05
Germany	264	246	2.45
France	211	189	3.08
Belgium	173	160	3.11
United States			
Anthracite	433	478	1.84
Bituminous	713	644	1.07

The effect of the war upon the annual outputs and pit-head prices of coal in Great Britain is shown by the following official figures for the three years 1914-1916:—

	Total Output Million tons	Average price at Pithead	
		s.	d.
1914	265.6	9	11.8
1915	253.2	12	5.6
1916	256.3	15	7.25

According to the third volume of the Report of the British Coal Industry Commission and the American Official Report "Mineral Resources of the United States", production, per day, per man employed in England and the United States compares as follows:—

Coal produced per man, per day

	United Kingdom	U. S. Bituminous	U. S. Anthracite
1880	1.33	?	?
1885	1.28	?	?
1890	1.08	2.56	1.85
1895	1.18	2.90	2.07
1900	1.10	2.98	2.40
1905	1.08	3.24	2.18
1910	1.00	3.46	2.17
1915	.98	3.91	2.19
1918	.80	3.77	2.27

Mining in anthracite in the United States is generally carried on by hand. The coal lies in thin, very irregular and very faulty seams. Five-sixths of the coal produced in the United States is bituminous.

According to the American mineral statistics for 1915, production per miner per day, in the three most important American coalfields was as follows.

Pennsylvania (bituminous)	4,00 tons
Illinois	4,35 „
W. Virginia	4,89 „

In the United States labor-saving devices of every kind are used to a much greater extent than in Europe. A comparison between the United States and Great Britain in this regard discloses the following figures.

	British Coal mined by machinery	American bituminous coal mined by machinery
1903	5,245,578 tons	69,620,441 tons
1910	15,747,558 „	155,368,119 „
1916	26,303,110 „	253,285,960 „

Of course coal cutting machines cannot be used everywhere. But the remarkable fact is that production per machine has steadily declined in the United Kingdom and has equally steadily increased in the United States.

	Output per Machine in United Kingdom	In the United States
1903 . . .	8,158 tons	10,457 tons
1910 . . .	8,039 „	11,722 „
1916 . . .	7,601 „	15,638 „

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